

# NACOmatic

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INSTRUMENT APPROACH PROCEDURE CHARTS



**IFR ALTERNATE AIRPORT MINIMUMS**

Standard alternate minimums for non precision approaches are 800-2 (NDB, VOR, LOC, TACAN, LDA, VORTAC, VOR/DME, ASR or WAAS LNAV); for precision approaches 600-2 (ILS or PAR). Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility or absence of weather reporting service. Civil pilots see FAR 91. IFR Alternate Airport Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Airport Minimums Notes for alternate airfield suitability.

**NAME ALTERNATE MINIMUMS**

**AUBURN-LEWISTON, ME**

AUBURN-LEWISTON

MUNI ..... **ILS or LOC Rwy 4<sup>1</sup>**  
**RNAV (GPS) Rwy 4<sup>2</sup>**  
**RNAV (GPS) Rwy 22<sup>3</sup>**

<sup>1</sup>ILS, Category C, 700-2, Category D, 800-2½; LOC, NA.

<sup>2</sup>Categories A,B,C, 800-2½, Category D, 800-2½.

<sup>3</sup>Category D, 800-2½.

**AUGUSTA, ME**

AUGUSTASTATE ..... **ILS or LOC Rwy 17<sup>1</sup>**  
**RNAV (GPS)-B<sup>2</sup>**  
**RNAV (GPS) Rwy 8<sup>2</sup>**  
**RNAV (GPS) Rwy 35<sup>2</sup>**  
**VOR/DME Rwy 8<sup>2</sup>**

<sup>1</sup>ILS, Categories B,C,D, 700-2.

<sup>2</sup>NA when local weather not available.

**BANGOR, ME**

BANGOR INTL ..... **ILS or LOC Rwy 33**  
ILS, LOC, Categories A,B, 1000-2; Categories C,D,E, 1000-3.

**BARRE-MONTPELIER, VT**

EDWARD F.

KNAPP STATE ..... **ILS or LOC Rwy 17<sup>1</sup>**  
**RNAV (GPS) Rwy 17<sup>23</sup>**  
**VOR/DME Rwy 35<sup>4</sup>**  
**VOR Rwy 35<sup>5</sup>**

<sup>1</sup>ILS, LOC, Categories A,B, 1900-2; Categories C, D, 1900-3.

<sup>2</sup>Category C, 800-2½; Category D, 1400-3.

<sup>3</sup>NA when local weather not available.

<sup>4</sup>Categories A,B, 900-2; Category C, 900-2½; Category D, 1400-3.

<sup>5</sup>Categories A,B, 1600-2; Categories C,D, 1600-3.

**NAME ALTERNATE MINIMUMS**

**BAR HARBOR, ME**

HANCOCK COUNTY-

BAR HARBOR ..... **LOC/DME BC Rwy 4**  
**ILS or LOC Rwy 22**  
**RNAV (GPS) Rwy 4**  
**RNAV (GPS) Rwy 22**

NA when local weather not available.

**BEDFORD, MA**

LAURENCE G. HANSCOM

FIELD ..... **ILS or LOC Rwy 11<sup>123</sup>**  
**ILS or LOC Rwy 29<sup>134</sup>**  
**RNAV (GPS) Rwy 11<sup>3</sup>**  
**RNAV (GPS) Rwy 23<sup>3</sup>**  
**RNAV (GPS) Rwy 29<sup>3</sup>**  
**VOR Rwy 23<sup>1</sup>**

<sup>1</sup>NA when control tower closed.

<sup>2</sup>ILS, Category D, 700-2.

<sup>3</sup>NA when local weather not available.

<sup>4</sup>ILS, Categories A,B, 800-2; Category C, 800-2½; Category D, 800-2½. LOC, Category C, 800-2½; Category D, 800-2½.

**BERLIN, NH**

BERLIN RGNL ..... **VOR-B<sup>1</sup>**  
**VOR/DME Rwy 18<sup>2</sup>**

<sup>1</sup>Categories A,B, 1100-2; Category C, 1100-3; Category D, 1200-3.

<sup>2</sup>Category B, 1200-2; Category C, 1200-3; Category D, 1300-3.

**BEVERLY, MA**

BEVERLY MUNI ..... **LOC Rwy 16**  
NA when control tower closed.

**BLOCK ISLAND, RI**

BLOCK ISLAND STATE .... **RNAV (GPS) Rwy 28**  
NA when local weather not available.



NAME ALTERNATE MINIMUMS

## KEENE, NH

DILLANT-HOPKINS ..... RNAV (GPS) Rwy 2<sup>12</sup>  
VOR Rwy 2<sup>3</sup>

<sup>1</sup>Category A, 900-2; Category B, 1000-2;  
Category C, 1000-3; Category D, 1200-3.

<sup>2</sup>NA when local weather not available.

<sup>3</sup>Categories A,B, 1200-2; Category C,D,  
1200-3.

## LACONIA, NH

LACONIA MUNI ..... ILS or LOC Rwy 8<sup>1</sup>  
NDB Rwy 8<sup>2</sup>  
RNAV (GPS) Rwy 8<sup>3</sup>  
RNAV (GPS) Rwy 26<sup>3</sup>

NA when local weather not available.

<sup>1</sup>ILS, LOC, Category A, 900-2; Category B,  
1100-2; Category C, 1100-3; Category D,  
1700-3.

<sup>2</sup>Category A, 1000-2; Category B, 1100-2;  
Category C, 1100-3; Category D, 1700-3.

<sup>3</sup>Category A, 900-2; Category B, 1000-2;  
Category C, 1100-3; Category D, 1700-3.

## LAWRENCE, MA

LAWRENCE MUNI ..... ILS Rwy 5<sup>1</sup>  
NDB or GPS Rwy 5<sup>2</sup>

<sup>1</sup>NA when control tower closed.

<sup>2</sup>Category C, 800-2¼; Category D, 800-2½.

## LEBANON, NH

LEBANON MUNI ..... ILS or LOC Rwy 18<sup>12</sup>  
RNAV (GPS) Rwy 7<sup>3</sup>  
RNAV (GPS) Rwy 18<sup>3</sup>  
RNAV (GPS) Rwy 25<sup>3</sup>  
RNAV (GPS) Rwy 36<sup>4</sup>  
VOR/DME Rwy 7<sup>5</sup>  
VOR Rwy 25<sup>6</sup>

<sup>1</sup>NA when control tower closed.

<sup>2</sup>ILS, LOC, Category A, 1000-2; Category B,  
1200-2; Categories C, D, 1300-3.

<sup>3</sup>Category A, 1100-2; Category B, 1200-2;  
Category C, D, 1200-3.

<sup>4</sup>Categories A, B, 1200-2; Categories C, D,  
1200-3.

<sup>5</sup>Categories A, B, 1000-2; Categories C, D,  
1100-3.

<sup>6</sup>Categories A, B, 1100-2; Categories C, D,  
1100-3.

## MANCHESTER, NH

MANCHESTER ..... ILS or LOC/DME Rwy 17<sup>12</sup>  
ILS or LOC Rwy 6<sup>2</sup>  
ILS or LOC Rwy 35<sup>2</sup>  
RNAV (GPS) Rwy 6<sup>1</sup>  
RNAV (GPS) Rwy 35<sup>1</sup>  
RNAV (GPS) Y Rwy 17<sup>1</sup>  
VOR/DME or GPS Rwy 17<sup>3</sup>

<sup>1</sup>NA when local weather not available.

NAME ALTERNATE MINIMUMS

## MARSHFIELD, MA

MARSHFIELD MUNI-GEORGE  
HARLOW FIELD ..... NDB Rwy 24  
RNAV (GPS) Rwy 6  
RNAV (GPS) Rwy 24

NA when local weather not available.

## MILLINOCKET, ME

MILLINOCKET MUNI ..... RNAV (GPS) Rwy 29  
VOR Rwy 29

NA when local weather not available.

Category D, 800-2¼.

## NANTUCKET, MA

NANTUCKET  
MEMORIAL ..... ILS or LOC Rwy 6<sup>12</sup>  
ILS or LOC Rwy 24<sup>12</sup>  
NDB Rwy 24<sup>1</sup>  
RNAV (GPS) Rwy 6<sup>2</sup>  
RNAV (GPS) Rwy 24<sup>2</sup>  
RNAV (GPS) Rwy 33<sup>2</sup>  
VOR Rwy 24<sup>2</sup>

<sup>1</sup>NA when control tower closed.

<sup>2</sup>NA when local weather not available.

## NASHUA, NH

BOIRE FIELD ..... RNAV (GPS) Rwy 32<sup>1</sup>  
VOR or GPS-A<sup>23</sup>  
VOR Rwy 32<sup>24</sup>

<sup>1</sup>NA when local weather not available.

<sup>2</sup>NA when control tower closed.

<sup>3</sup>Category D, 800-2¼.

<sup>4</sup>Category C, 800-2¼, Category D, 800-2½.

## NEW BEDFORD, MA

NEW BEDFORD RGNL ..... ILS or LOC Rwy 5<sup>1</sup>  
LOC BC Rwy 23  
NDB Rwy 5

NA when control tower closed.

<sup>1</sup>ILS, 700-2.

## NEW HAVEN, CT

TWEED-NEW HAVEN ..... ILS or LOC Rwy 2<sup>1</sup>  
RNAV (GPS) Rwy 2<sup>2</sup>  
VOR-A<sup>2</sup>  
VOR Rwy 2<sup>2</sup>

NA when control tower closed.

NA when local weather not available.

<sup>1</sup>ILS, Categories A,B,C, 800-2; Category D,  
800-2¼. LOC, Category D, 800-2¼.

<sup>2</sup>Category D, 800-2¼

## NEWPORT, RI

NEWPORT STATE ..... RNAV (GPS) Rwy 16  
VOR/DME Rwy 16

NA when local weather not available.

NAME ALTERNATE MINIMUMS  
**NORTH KINGSTOWN, RI**  
 QUONSET STATE ..... ILS or LOC Rwy 16<sup>12</sup>  
    RNAV (GPS) Rwy 16<sup>3</sup>  
    RNAV (GPS) Rwy 34<sup>3</sup>  
    VOR-A<sup>1</sup>  
    VOR Rwy 34<sup>1</sup>

<sup>1</sup>NA when control tower closed.  
<sup>2</sup>ILS, Categories A,B,C, 800-2; Category D, 800-2½. LOC, Category D, 800-2½.  
<sup>3</sup>NA when local weather not available.

**NORWOOD, MA**  
 NORWOOD MEMORIAL ..... LOC Rwy 35  
 NA when control tower closed.

**ORANGE, MA**  
 ORANGE MUNI ..... VOR-A  
 Categories A,B, 1400-2; Categories C,D, 1400-3.

**OXFORD, CT**  
 WATERBURY-OXFORD ... RNAV (GPS) Rwy 18  
 NA when local weather not available.

**PAWTUCKET, RI**  
 NORTH  
 CENTRAL STATE ..... RNAV (GPS) Rwy 5  
    RNAV (GPS) Rwy 23  
    VOR-A  
    VOR-B  
 NA when local weather not available.

**PLYMOUTH, MA**  
 PLYMOUTH MUNI ..... ILS or LOC/DME Rwy 6  
    RNAV (GPS) Rwy 6  
 NA when local weather not available.

**PORTLAND, ME**  
 PORTLAND INTL  
 JETPORT ..... ILS or LOC Rwy 11  
    ILS or LOC Rwy 29  
 ILS, Category D, 700-2.

**PRESQUE ISLE, ME**  
 NORTHERN MAINE REGIONAL AIRPORT  
 AT PRESQUE ISLE ..... ILS or LOC Rwy 1<sup>12</sup>  
    RNAV (GPS) Rwy 1<sup>1</sup>  
    RNAV (GPS) Rwy 19<sup>13</sup>  
    RNAV (GPS) Rwy 28<sup>1</sup>  
    VOR Rwy 19<sup>4</sup>

<sup>1</sup>NA when local weather not available.  
<sup>2</sup>Categories B, C, D, 700-2.  
<sup>3</sup>Category D, 800-2½.  
<sup>4</sup>Category C, 800-2½; Category D, 800-2½.

NAME ALTERNATE MINIMUMS  
**PROVIDENCE, RI**  
 THEODORE FRANCIS GREEN  
 STATE ..... ILS or LOC Rwy 5  
    ILS or LOC Rwy 23  
    ILS Rwy 34  
 NA when control tower closed.

**ROCKLAND, ME**  
 KNOX COUNTY RGNL ..... RNAV (GPS) Rwy 3  
    RNAV (GPS) Rwy 31  
 NA when local weather not available.

**RUTLAND, VT**  
 RUTLAND -SOUTHERN  
 VERMONT RGNL ..... RNAV (GPS) Rwy 1<sup>1</sup>  
    RNAV (GPS) Rwy 19<sup>2</sup>  
    VOR/DME Rwy 19<sup>3</sup>  
 NA when local weather not available.

<sup>1</sup>Categories A, B, 2400-2; Category C, 2400-3.  
<sup>2</sup>Categories A, B, 1500-2; Category C, 1500-3.  
<sup>3</sup>Categories A, B, 1800-2; Category C, 1800-3.

**VINEYARD HAVEN, MA**  
 MARTHA'S VINEYARD .... ILS or LOC Rwy 24<sup>1</sup>  
    RNAV (GPS) Rwy 6  
    RNAV (GPS) Rwy 24  
    VOR Rwy 6  
    VOR Rwy 24

NA when local weather not available.  
<sup>1</sup>NA when control tower closed.

**WATERVILLE, ME**  
 WATERVILLE  
 ROBERT LAFLEUR ..... RNAV (GPS) Rwy 23  
 NA when local weather not available.

**WESTFIELD/SPRINGFIELD, MA**  
 BARNES MUNI ..... ILS or LOC Rwy 20<sup>12</sup>  
    RNAV (GPS) Rwy 20<sup>12</sup>  
    VOR or TACAN Rwy 2<sup>34</sup>  
    VOR Rwy 20<sup>35</sup>

<sup>1</sup>Categories, A,B, 900-2; Category C, 900-2½; Category D, 900-3.  
<sup>2</sup>NA when local weather not available.  
<sup>3</sup>NA when control tower closed.  
<sup>4</sup>Categories A,B, 900-2; Category C, 900-2½; Category D, 900-3; Category E, 1300-3.  
<sup>5</sup>Categories A,B, 900-2; Category C, 900-2½; Category D, 900-3.

**WHITEFIELD, NH**  
 MOUNT WASHINGTON  
 RGNL ..... RNAV (GPS) Rwy 10  
 Categories A,B, 900-2; Category C, 900-2½.

NAME ALTERNATE MINIMUMS

**WILLIMANTIC, CT**

WINDHAM ..... LOC Rwy 27<sup>1</sup>  
VOR-A

Category C, 800-2¼.

<sup>1</sup>NA when local weather not available.

**WINDSOR LOCKS, CT**

BRADLEY INTL ..... ILS or LOC Rwy 6<sup>1</sup>  
ILS or LOC Rwy 24<sup>2</sup>  
ILS or LOC Rwy 33<sup>2</sup>  
RNAV (GPS) Rwy 6<sup>2</sup>  
RNAV (GPS) Rwy 15<sup>3</sup>  
RNAV (GPS) Rwy 24<sup>2</sup>  
RNAV (GPS) Rwy 33<sup>2</sup>  
VOR or TACAN Rwy 6<sup>4</sup>  
VOR or TACAN Rwy 15<sup>5</sup>  
VOR or TACAN Rwy 24<sup>6</sup>  
VOR or TACAN Rwy 33<sup>6</sup>

<sup>1</sup>Categories A,B, 900-2; Category C, 900-2½;  
Category D, 900-2¾.

<sup>2</sup>Category D, 900-2¾.

<sup>3</sup>Categories A,B, 1000-2; Category C,  
1000-2¾.

<sup>4</sup>Categories A,B, 1000-2; Category C, 1000-  
2¾, Category D, 1000-3, Category E, 1300-3.

<sup>5</sup>Categories A,B, 1200-2; Categories C, D, E,  
1200-3.

<sup>6</sup>Category D, 1000-3; Category E, 1300-3.

**WORCESTER, MA**

WORCESTER RGNL ..... ILS or LOC Rwy 11<sup>12</sup>  
ILS or LOC Rwy 29<sup>12</sup>  
NDB Rwy 11<sup>23</sup>  
RNAV (GPS) Rwy 11<sup>23</sup>  
RNAV (GPS) Rwy 29<sup>23</sup>  
VOR/DME Rwy 33<sup>3</sup>

NA when control tower closed.

<sup>1</sup>ILS, Category B, 700-2; Category C, 800-2;  
Category D, 1000-3. LOC, Category D,  
1000-3.

<sup>2</sup>NA when local weather not available.

<sup>3</sup>Category D, 1000-3.

INSTRUMENT APPROACH PROCEDURE CHARTS

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude , and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned a SID or radar vector by ATC, an ODP may be flown without ATC clearance to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

| NAME | TAKE-OFF MINIMUMS | NAME | TAKE-OFF MINIMUMS |
|------|-------------------|------|-------------------|
|------|-------------------|------|-------------------|

AUBURN-LEWISTON, ME

AUBURN-LEWISTON MUNI

TAKE-OFF MINIMUMS: **Rwy 17**, 500-2¼ or std. with a min. climb of 266' per NM to 900. **Rwy 22**, std. with a min. climb of 312' per NM to 1500, or 1100-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 17**, climb via heading 165° to 900 before turning northeast. **Rwy 22**, climb to 1500 direct LE LOM. Cross LE LOM at 1500 or above before turning southwest. For climb in visual conditions cross Auburn/Lewiston Muni at or above 1300.

NOTE: **Rwy 4**, multiple trees beginning 297' from departure end of runway, 78' right of centerline, up to 90' AGL/386' MSL. Multiple trees beginning 331' from departure end of runway, 277' left of centerline, up to 86' AGL/323' MSL. Abandoned aircraft 73' from departure end of runway, 478' right of centerline, 19' AGL/289' MSL. Abandoned aircraft 36' from departure end of runway, 451' right of centerline, 18' AGL/288' MSL. Pole 1487' from departure end of runway, 348' right of centerline, 51' AGL/314' MSL. Pole 101' from departure end of runway, 387' left of centerline, 37' AGL/277' MSL. Fence 132' from departure end of runway, 306' right of centerline, 11' AGL/267' MSL. **Rwy 17**, tree 1209' from departure end of runway, 390' right of centerline, 72' AGL/364' MSL. Tree 909' from departure end of runway, 336' right of centerline, 51' AGL/350' MSL. Tree 1819' from departure end of runway, 169' left of centerline, 92' AGL/371' MSL. Tree 1053' from departure end of runway, 252' left of centerline, 60' AGL/336' MSL. Tree 575' from departure end of runway, 175' left of centerline,

AUBURN-LEWISTON MUNI(CONT.)

39' AGL/322' MSL. Tree 881' from departure end of runway, 110' right of centerline, 35' AGL/327' MSL. Terrain 159' from departure end of runway, 487' right of centerline, 0' AGL/302' MSL. Tree 1.9 NM from departure end of runway, 247' left of centerline, 129' AGL/576' MSL. Terrain 276' from departure end of runway, 302' right of centerline, 0' AGL/299' MSL. Road 531' from departure end of runway, 156' left of centerline, 0' AGL/305' MSL. Terrain 533' from departure end of runway, 463' right of centerline, 0' AGL/302' MSL. Terrain 18' from departure end of runway, 140' right of centerline, 0' AGL/289' MSL. Tower 1.7 NM from departure end of runway, 4211' left of centerline, 193' AGL/752' MSL. **Rwy 22**, tree 4322' from departure end of runway, 1403' right of centerline, 87' AGL/439' MSL. Tree 4970' from departure end of runway, 616' left of centerline, 62' AGL/414' MSL. Tree 5547' from departure end of runway, 633' right of centerline, 86' AGL/428' MSL. Tree 5242' from departure end of runway, 1108' right of centerline, 51' AGL/419' MSL. Tree 3040' from departure end of runway, 993' right of centerline, 74' AGL/363' MSL. Ground 4784' from departure end of runway, 88' right of centerline, 0' AGL/ 404' MSL. Ground 3902' from departure end of runway, 811' right of centerline, 0' AGL/375' MSL. Tree 3189' from departure end of runway, 500' right of centerline, 73' AGL/352' MSL.



## AUBURN-LEWISTON MUNI(CON'T)

**Rwy 35**, tree 1877' from departure end of runway, 357' left of centerline, 104' AGL/344' MSL. Tree 870' from departure end of runway, 380' right of centerline, 72' AGL/312' MSL. Tree 1146' from departure end of runway, 378' left of centerline, 77' AGL/317' MSL. Tree 1520' from departure end of runway, 170' right of centerline, 62' AGL/302' MSL.

## AUGUSTA, ME

## AUGUSTA STATE

TAKE-OFF MINIMUMS: **Rwys 8, 35**, 300-1. **Rwy 26**, 400-1 or std. with a min. climb of 250' per NM to 700.

## BANGOR, ME

## BANGOR INTL (BGR)

## AMDT 2 09239 (FAA)

NOTE: **Rwy 15**, trees beginning 1694' from DER, 629' left of centerline, up to 79' AGL/278' MSL.

## BAR HARBOR, ME

## HANCOCK COUNTY-BAR HARBOR

DEPARTURE PROCEDURE: **Rwy 17**, climbing right turn via heading 220° to 2100 before proceeding on course. **Rwy 22**, climb via heading 224° to 1100 before proceeding east or southeast bound. **Rwy 35**, climb via heading 349° to 600 before proceeding on course.

NOTE: **Rwy 4**, road 324' from departure end of runway, 524' left of centerline, 15' AGL/79' MSL. Multiple trees beginning 119' from departure end of runway, 231' right of centerline, up to 60' AGL/193' MSL. **Rwy 17**, bush 116' from departure end of runway, 164' left of centerline, 10' AGL/47' MSL. Tree 245' from departure end of runway, 346' right of centerline, 44' AGL/82' MSL. **Rwy 22**, multiple poles and trees beginning 562' from departure end of runway, 329' left of centerline, up to 60' AGL/135' MSL. Terrain, multiple poles and trees beginning 450' left of departure end of runway, up to 60' AGL/142' MSL. **Rwy 35**, terrain and multiple trees beginning 35' from departure end of runway, 340' left of centerline, up to 60' AGL/217' MSL. Glideslope antenna and multiple trees beginning 657' from departure end of runway, 565' right of centerline up to 60' AGL/146' MSL.

## BARRE-MONTEPELIER, VT

## EDWARD F. KNAPP STATE

TAKE-OFF MINIMUMS: **Rwy 17**, 400-1. **Rwy 23**, 500-2 or std. with a min. climb of 400' per NM to 2600.

DEPARTURE PROCEDURE: **Rwy 5**, climb runway heading to 2100, then climbing right turn to 3900 direct MPV VOR/DME. **Rwy 17**, climb direct to MPV VOR/DME, climb in holding pattern (N, right turns, 160° inbound) to 3500 before proceeding on course. **Rwy 23**, climbing left turn to 3500 direct MPV VOR/DME.

**Rwy 35**, climb runway heading to 1600, then climbing right turn to 3900 direct MPV VOR/DME.

## BEDFORD, MA

## LAURENCE G. HANSCOM FIELD (BED)

## AMDT 4 08269 (FAA)

TAKE-OFF MINIMUMS: **Rwy 11**, 200-1¼ or std. w/ min. climb of 245' per NM to 400, or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 2000' prior to departure end of runway. **Rwy 23**, 300-1¼ or std. w/ min. climb of 415' per NM to 400.

NOTE: **Rwy 5**, terrain beginning 2' from departure end of runway, 330' left of centerline, up to 147' MSL. Trees beginning 44' from departure end of runway, 10' left of centerline, up to 87' AGL/214' MSL. Trees beginning 246' from departure end of runway, 113' right of centerline, up to 92' AGL/217' MSL. Fence 152' from departure end of runway, 248' right of centerline, 5' AGL/132' MSL. Bush 171' from departure end of runway, 309' left of centerline, 13' AGL/140' MSL. Light on pole 575' from departure end of runway, 404' right of centerline, 55' AGL/182' MSL. Poles beginning 835' from departure end of runway, 347' right of centerline, up to 55' AGL/177' MSL. Light on pole 1912' from departure end of runway, 504' right of centerline, 59' AGL/177' MSL. **Rwy 11**, tree 2694' from departure end of runway, 924' left of centerline, 65' AGL/192' MSL. Antenna tower 5040' from departure end of runway, 248' left of centerline, 155' AGL/282' MSL. **Rwy 23**, vehicles on roadway beginning 534' from departure end of runway, left and right of centerline, up to 15' AGL/167' MSL. Trees beginning 917' from departure end of runway, 126' right of centerline, up to 100' AGL/347' MSL. Terrain 982' from departure end of runway, 338' right of centerline, 162' MSL. Trees beginning 1081' from departure end of runway, 161' left of centerline, up to 100' AGL/414' MSL. **Rwy 29**, vehicles on roadway 314' from departure end of runway, 564' left of centerline, 15' AGL/152' MSL. Trees beginning 388' from departure end of runway, 323' left of centerline, up to 72' AGL/240' MSL. Trees beginning 2675' from departure end of runway, 228' right of centerline, up to 96' AGL/246' MSL.

## BELFAST, ME

## BELFAST MUNI

TAKE-OFF MINIMUMS: **Rwy 33**, 300-1¼ or std. with a min. climb of 219' per NM to 600.

DEPARTURE PROCEDURE: **Rwy 15**, climb heading 136° to 900 before turning south.

NOTE: **Rwy 33**, light pole 1955' from departure end of runway, 510' left of centerline, 100' AGL/297' MSL. Multiple trees beginning 1.4 NM from departure end of runway, 1682' left of centerline, up to 80' AGL/429' MSL.

## BENNINGTON, VT

## WILLIAM H. MORSE STATE

TAKE-OFF MINIMUMS: **Rwy 13**, 2200-3, restricted to CAT A and B only, CAT C NA. **Rwy 31**, 500-2 or std. with a min. climb of 240' per NM to 1400.

DEPARTURE PROCEDURE: **Rwy 13**, climbing left turn direct to CAM VORTAC, continue climb in hold to 3500 before proceeding on course. **Rwy 31**, climbing right turn direct CAM VORTAC continue climb in hold to 3500 before proceeding on course.





**BERLIN, NH****BERLIN RGNL**TAKE-OFF MINIMUMS: **Rwys 18, 36**, 1000-2.DEPARTURE PROCEDURE: **Rwys 18, 36**, climb visually over the airport to 2100, continue climb to 3000 via BML R-192, then climbing right turn to 4400 direct BML VOR/DME and hold. Climb in holding pattern (N, left turns, 192° inbound) to MEA before proceeding on course.**BEVERLY, MA****BEVERLY MUNI (BVY)****AMDT 2B 08241 (FAA)**TAKE-OFF MINIMUMS: **Rwy 27**, 300-1 or std. w/ min. climb of 315' per NM to 400.DEPARTURE PROCEDURE: **Rwy 27**, climb heading 270° to 700 before turning left.

NOTE: **Rwy 9**, multiple trees beginning 82' from departure end of runway, 50' left of centerline, up to 114' AGL/232' MSL. Tree 258' from departure end of runway, 47' right of centerline, 87' AGL/192' MSL. **Rwy 16**, multiple trees beginning 286' from departure end of runway, 213' left of centerline, up to 80' AGL/148' MSL. Trees, stack and obstruction light on buildings beginning 121' from departure end of runway, 4' right of centerline up to 90' AGL/194' MSL. **Rwy 27**, multiple trees and antenna beginning 8' from departure end of runway, 144' left of centerline, up to 98' AGL/217' MSL, multiple trees beginning 42' from departure end of runway, 84' right of centerline up to 97' AGL/160' MSL. Building 5290' from departure end of runway, 980' left of centerline, 108' AGL/217' MSL. **Rwy 34**, multiple trees beginning 437' from departure end of runway, 5' left of centerline, 91' AGL/188' MSL. Multiple trees 509' from departure end of runway, 1' right of centerline, 80' AGL/174' MSL.

**BIDDEFORD, ME****BIDDEFORD MUNI**TAKE-OFF MINIMUMS: **Rwy 24**, 300-2 or std. w/ min. climb of 214' per NM to 600, or alternatively, w/ std. takeoff minimums and normal 200'/NM climb gradient, takeoff must occur no later than 1700 prior to departure end of runway.

NOTE: **Rwy 6**, multiple trees beginning 121' from departure end of runway, 243' left of centerline, up to 60' AGL/229' MSL. Multiple trees beginning 23' from departure end of runway, 132' right of centerline, up to 60' AGL/219' MSL. Multiple trees beginning 538' from departure end of runway, 6' right of centerline, up to 60' AGL/229' MSL. **Rwy 24**, multiple trees beginning 342' from departure end of runway, 287' left of centerline, up to 60' AGL/219' MSL. Multiple trees beginning 492' from departure end of runway, 242' right of centerline, up to 60' AGL/209' MSL. Multiple trees beginning 1317' from departure end of runway, 44' right of centerline, up to 60' AGL/209' MSL. Assumed obstacle 1.7 NM from departure end of runway, 1802' right of centerline, 200' AGL/429' MSL.

**BLOCK ISLAND, RI****BLOCK ISLAND STATE**TAKE-OFF MINIMUMS: **Rwy 28**, 300-1.DEPARTURE PROCEDURE: **Rwy 28**, climb runway heading at 250° per NM to 400 feet before turning.**BOSTON, MA****GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)****AMDT 12A 09127 (FAA)**TAKE-OFF MINIMUMS: **Rwy 4L**, 300-1 or std. with a min. climb of 358' per NM to 300. **Rwy 9**, 300-1½ or std. with a min. climb of 272' per NM to 300. **Rwy 14**, 500-3 or std. w/ a min. climb of 223' per NM to 600, or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1900' prior to DER.

**Rwy 22L**, 300-1 or standard when tower reports no tall vessels in the departure area. **Rwy 22R**, 300-1½ or std. w/ a min. climb of 320' per NM to 400. **Rwy 27**, std. w/ a min. climb of 477' per NM to 1300. **Rwys 32, 33R**, NA-environmental. **Rwy 33L**, 300-1½ or std. w/ a min. climb of 226' per NM to 400, or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 2000' prior to DER.

DEPARTURE PROCEDURE: **Rwy 4L**, climb on a heading between 292° clockwise to 216° from DER, or minimum climb of 208' per NM to 1100 for all other courses. **Rwy 14**, climb on a heading between 322° clockwise to 258° from DER, or minimum climb of 237' per NM to 1100 for all other courses. **Rwys 22L, 22R**, climb heading 216° to 800 before turning right.

**Rwy 33L**, climb heading 331° to 700 before turning left.

NOTE: **Rwy 4L**, light on blast fence 184' from DER, 249' left of centerline, 6' AGL/23' MSL. Tree 2094' from DER, 92' left of centerline, 47' AGL/77' MSL. Tree 3975' from DER, 1486' left of centerline, 50' AGL/198' MSL. Tree 4228' from DER, 544' left of centerline, 47' AGL/143' MSL. Ship 694' from DER, on centerline, 50' AGL/50' MSL. Light on blast fence 230' from DER, 63' right of centerline, 6' AGL/23' MSL. Light on pole and multiple trees beginning 1806' from DER, 740' right of centerline, up to 33' AGL/79' MSL. **Rwy 4R**, light on pole and multiple trees beginning 1807' from DER, 403' left of centerline, up to 33' AGL/79' MSL. Ship 579' from DER, on centerline, 50' AGL/50' MSL. Crane 2001' from DER, 434' right of centerline, 101' AGL/114' MSL. Mobile crane 2009' from DER, 206' right of centerline, 114' AGL/134' MSL. **Rwy 9**, antenna on standpipe and tank beginning 5878' from DER, 1429' left of centerline, up to 138' AGL/217' MSL. Ship 763' from DER, on centerline, 65' AGL/65' MSL. **Rwy 14**, ship rig 5439' from DER, 1824' right of centerline, 176' AGL/176' MSL. Wind turbine 2.5 NM from DER, 2998' right of centerline, 401' AGL/434' MSL. **Rwy 15L**, sign 169' from DER, 279' right of centerline, 6' AGL/19' MSL. **Rwy 15R**, sign 45' from DER, 267' right of centerline, 6' AGL/16' MSL. **Rwy 22L**, rig 2441' from DER, 35' left of centerline, 176' AGL/176' MSL. Obstruction light pole 3586' from DER, 926' left of centerline, 108' AGL/128' MSL. Mobile crane 3676' from DER, 440' right of centerline, 122' AGL/145' MSL. **Rwy 22R**, rig 4586' from DER, 1535' left of centerline, 176' AGL/176' MSL. Rig 4064' from DER, 8' right of centerline, 176' AGL/176' MSL. Stacks 1.3 NM from DER, 1598' right of centerline, 255' AGL/278' MSL. **Rwy 27**, multiple buildings beginning 1.3 NM from DER, 129' left of centerline, up to 251' AGL/261' MSL. Light pole and rod on pole beginning 1691' from DER, 749' right of centerline, up to 60' AGL/100' MSL. Rig 4822' from DER, 35' right of centerline, 176' AGL/176' MSL. Multiple buildings beginning 1.7 NM from DER, 1479' right of centerline, up to 685' AGL/701' MSL.

GENERAL EDWARD LAWRENCE LOGAN INTL  
(CON'T)

**Rwy 33L**, multiple lights, rod on tank and light on building beginning 796' from DER, 604' left of centerline, up to 46' AGL/73' MSL. Building and chimney on building beginning 4301' from DER, 1079' left of centerline, up to 40' AGL/149' MSL. Bridge 1.4 NM from DER, 2615' left of centerline, 263' AGL/263' MSL. Multiple trees, wind direction indicator on tower and sign beginning 249' from DER, 51' right of centerline, up to 35' AGL/101' MSL.

BRIDGEPORT, CT

IGOR I. SIKORSKY MEMORIAL

TAKE-OFF MINIMUMS: **Rwy 29**, 600-2 or std. with a min. climb of 280' per NM to 700.  
NOTE: **Rwy 6**, cross departure end of runway at or above 34' AGL/42' MSL. **Rwy 11**, 26' AGL/41' MSL road/ vehicle 207' from departure end of runway. Cross departure end of runway at or above 35' AGL/43' MSL.  
**Rwy 24**, cross departure end of runway at or above 23' AGL/30' MSL. **Rwy 29**, cross departure end of runway at or above 35' AGL/45' MSL.

BRUNSWICK NAS (KNHZ)

BRUNSWICK, ME . . . . . 09295

**Rwy 1L**, CAUTION: Cross DER at or above 30' AGL/102' MSL.  
**Rwy 1R**, CAUTION: Cross DER at or above 10' AGL/82' MSL.

BURLINGTON, VT

BURLINGTON INTL (BTV)  
AMDT 12 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwy 1**, std. w/ min. climb of 288' per NM to 3200 or 3000-3 for climb in visual conditions.  
**Rwy 15**, std. w/ min climb of 447' per NM to 4800 or 3000-3 for climb in visual conditions. **Rwy 19**, std. w/ min climb of 377' per NM to 4100 or 3000-3 for climb in visual conditions. **Rwy 33**, std. w/ min of 210' per NM to 2400 or 3000-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 1**, climb heading 006° to 3200 before proceeding on course or for climb in visual conditions, cross Burlington Intl airport at or above 3200 before proceeding on course. **Rwy 15**, climb heading 146° to 3900 before proceeding on course or for climb in visual conditions, cross Burlington Intl airport at or above 3200 before proceeding on course. **Rwy 19**, climb heading 186° to 4100 before proceeding on course or for climb in visual conditions, cross Burlington Intl airport at or above 3200 before proceeding on course. **Rwy 33**, climb heading 326° to 2400 before proceeding on course or for climb in visual conditions, cross Burlington Intl airport at or above 3200 before proceeding on course.

NOTE: **Rwy 1**, trees beginning 575' from departure end of runway, 75' left of centerline, up to 61' AGL/380' MSL. Trees beginning 1396' from departure end of runway, 216' right of centerline, up to 45' AGL/384' MSL. **Rwy 15**, bush 318' from departure end of runway, 292' left of centerline, 4' AGL/343' MSL. Trees beginning 1400' from departure end of runway, 358' right of centerline, up to 88' AGL/1173' MSL. Trees beginning 1801' from departure end of runway, 377' left of centerline, up to 88' AGL/1197' MSL. Hopper 2029' from departure end of runway 524' left of centerline, 61' AGL/400' MSL. Building 3411' from departure end of runway, 1117' left of centerline, 110' AGL/430' MSL. **Rwy 19**, trees beginning 168' from departure end of runway, 24' right of centerline, up to 87' AGL/436' MSL. Trees beginning 172' from departure end of runway, 75' left of centerline, up to 74' AGL/413' MSL. **Rwy 33**, trees beginning 190' from departure end of runway, 225' right of centerline, up to 50' AGL/356' MSL. Pole 971' from departure end of runway, 755' left of centerline, 58' AGL/338' MSL. Trees beginning 1843' from departure end of runway, 866' left of centerline, up to 78' AGL/357' MSL.

CARIBOU, ME

CARIBOU MUNI

TAKE-OFF MINIMUMS: **Rwys 1, 11, 19, 29**, 300-1.

**CHATHAM, MA****CHATHAM MUNI**

TAKE-OFF MINIMUMS: **Rwy 6**, 300-1 or std. w/ min. climb of 462' per NM to 300. **Rwy 24**, 400-2 or std. w/ min. climb of 248' per NM to 500.

NOTE: **Rwy 6**, multiple trees beginning 26' from departure end of runway, 158' left of centerline, up to 100' AGL/169' MSL. Multiple trees beginning 62' from departure end of runway, 245' right of centerline, up to 100' AGL/159' MSL. **Rwy 24**, multiple trees beginning 179' from departure end of runway, 216' left of centerline, up to 100' AGL/159' MSL. Multiple trees beginning 318' from departure end of runway, 227' right of centerline, up to 100' AGL/159' MSL. Tower 1.6 NM from departure end of runway, 2526' right of centerline, 313' AGL/318' MSL.

**CLAREMONT, NH****CLAREMONT MUNI**

TAKE-OFF MINIMUMS: **Rwy 11**, 700-3 or std. with a min. climb of 490' per NM to 1400, or 3100 2½ for climb in visual conditions. **Rwy 29**, 1300-3 or 3100 2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 11, 29**, climb in visual conditions to cross Claremont Muni at or above 3000.

NOTE: **Rwy 11**, multiple trees and towers on rising terrain, 1.5 NM from departure end of runway, 3000' right of centerline, and 1.6 NM from departure end of runway, 2660' left of centerline, up to 200' AGL/1143' MSL. **Rwy 29**, multiple trees on rising terrain, 1.1 NM from departure end of runway, 800' left of centerline, and 1.3 NM from departure end of runway, 2000' right of centerline, up to 80' AGL/1044' MSL. Trees and towers 2 NM from departure end of runway on centerline, up to 200' AGL/929' MSL.

**CONCORD, NH****CONCORD MUNI**

TAKE-OFF MINIMUMS: **Rwy 12**, 500-1 or std. with a min. climb of 350' per NM to 1300. **Rwy 17**, 300-1 or std. with a min. climb of 220' per NM to 1200. **Rwy 30**, 800-3 or std. with a min. climb of 260' per NM to 1300. **Rwy 35**, 300-1 or std. with a min. climb of 320' per NM to 1300.

DEPARTURE PROCEDURE: **Rwy 12**, climb to 900 then climbing right turn to CON VORTAC before proceeding on course. **Rwy 17**, climb to 1200 before turning on course. **Rwy 35**, climb to 1300 before turning on course.

**DANBURY, CT****DANBURY MUNI**

TAKE-OFF MINIMUMS: **Rwy 8**, 600-2. **Rwy 17**, 600-1. **Rwy 26**, 500-2. **Rwy 35**, 900-2 or std. with a min. climb of 360' per NM to 1500.

DEPARTURE PROCEDURE: **Rwys 8, 17**, climb runway heading to 1200 before turning on course. **Rwys 26, 35**, climb runway heading to 1500 before proceeding on course.

**DANIELSON, CT****DANIELSON**

TAKE-OFF MINIMUMS: **Rwy 13**, 700-2 or std. with a min. climb of 300' per NM to 1100.

DEPARTURE PROCEDURE: **Rwy 13**, climb to 1100 before turning on course. **Rwy 31**, climb to 1000 feet before turning on course.

**DEXTER, ME****DEXTER RGNL**

TAKE-OFF MINIMUMS: **Rwy 7, 25**, NA.

DEPARTURE PROCEDURE: **Rwy 16**, climb runway heading to 1000 before turning westbound. **Rwy 34**, climb runway heading to 1800 before turning northeastbound.

**EASTPORT, ME****EASTPORT MUNI**

TAKE-OFF MINIMUMS: **Rwy 33**, 300-1 or std. with a min. climb of 240' per NM to 300.

**ELIOT, ME****LITTLEBROOK AIR PARK**

NOTE: **Rwy 12**, house 118' right of departure end of runway, 23' AGL/129' MSL. Brush 200' from departure end of runway, 66' left of centerline, 16' AGL/122' MSL. Trees 345' from departure end of runway, 140' left of centerline, 71' AGL/130' MSL. **Rwy 30**, trees 220' from departure end of runway, 125' right of centerline, 19' AGL/144' MSL. Brush 100' right of departure end of runway, 20' AGL/159' MSL.

**FITCHBURG, MA****FITCHBURG MUNI**

TAKE-OFF MINIMUMS: **Rwys 2, 14, 20**, NA-obstacles. **Rwy 32**, std. with a min. climb of 314' per NM to 1600, or 1500-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 32**, climb via heading 324° to 2600 before proceeding on course. For climb in visual conditions: cross Fitchburg Muni Airport at or above 1800.

NOTE: **Rwy 32**, multiple trees beginning 144' from departure end of runway, 260' left of centerline up to 100' AGL/796' MSL, multiple trees beginning 36' from departure end of runway, 150' right of centerline up to 100' AGL/796' MSL.

**FRENCHVILLE, ME****NORTHERN AROOSTOOK RGNL**

TAKE-OFF MINIMUMS: **Rwy 32**, 300-1¼ or std. w/ min. climb of 503' per NM to 1300.

NOTE: **Rwy 14**, trees beginning 101' from departure end of runway, 348' right of centerline, up to 80' AGL/1079' MSL. **Rwy 32**, trees beginning 3128' from departure end of runway, 952' left of centerline, up to 80' AGL/1179' MSL, trees beginning 1608' from departure end of runway, 433' right of centerline, up to 80' AGL/1119' MSL.

**FRYEBURG, ME**

EASTERN SLOPES RGNL (IZG)

AMDT 4 08325 (FAA)

TAKE-OFF MINIMUMS: **Rwy 14**, std. with a min. climb of 310' per NM to 2100, or 1600-3 for climb in visual conditions. **Rwy 32**, 300-1½ with a min. climb of 471' per NM to 6600, or 1600-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 14**, climb heading 143° to 3000 before turning. For climb in visual conditions cross Eastern Slopes Rgnl airport at or above 3800 before proceeding on course. **Rwy 32**, for climb in visual conditions cross Eastern Slopes Rgnl airport at or above 3800 before proceeding on course.

NOTE: **Rwy 32**, tree 454' from departure end of runway, 558' left of centerline, 100' AGL/579' MSL. Trees beginning 1249' from departure end of runway, 734' right of centerline, up to 100' AGL/659' MSL. Trees and tower beginning 1.1 NM from departure end of runway, 2155' left of centerline, up to 100' AGL/1139' MSL.

**GARDNER, MA**

GARDNER MUNI

TAKE-OFF MINIMUMS: **Rwy 18**, 300-1. **Rwy 36**, 500-2.

**GREAT BARRINGTON, MA**

WALTER J. KOLADZA

TAKE-OFF MINIMUMS: **Rwy 11**, 1200-2 or std. with a min. climb of 440' per NM until passing 2000. **Rwy 29**, 800-2 or std. with a min. climb of 310' per NM to 1600.

DEPARTURE PROCEDURE: **Rwys 11, 29**, climb runway heading to 2200 before proceeding on course.

**GREENVILLE, ME**

GREENVILLE MUNI

TAKE-OFF MINIMUMS: **Rwy 3**, 1000-3.**Rwys 21, 32**, 300-1.

DEPARTURE PROCEDURE: **Rwy 3**, climbing left turn heading 005° to 3000 before proceeding on course. **Rwys 14, 21**, climb runway heading to 3000 before proceeding on course. **Rwy 32**, climbing right turn heading 005° to 3000 before proceeding on course.

**GREENVILLE SEAPLANE BASE**TAKE-OFF MINIMUMS: **North/South**, 600-1.

DEPARTURE PROCEDURE: **North**, climb to 3400 via heading 360° before proceeding on course.

**South**, climb to 3400 via heading 180° before proceeding on course.

**GROTON (NEW LONDON), CT**

GROTON-NEW LONDON

TAKE-OFF MINIMUMS: **Rwy 33**, 300-1 or std. with a min. climb of 350' per NM to 300.

DEPARTURE PROCEDURE: **Rwy 33**, climb via heading 329° to 500, then climbing right turn to intercept GON VOR/DME R-335 to 2000 before proceeding on course.

NOTE: **Rwy 5**, road, multiple trees, obstruction lights and towers beginning 215' from departure end of runway, 500' left of centerline, up to 70' AGL/91' MSL. Tree 1.3 NM from departure end of runway, 1083' left of centerline, 87' AGL/202' MSL. **Rwy 15**, bush 53' from departure end of runway, 238' right of centerline, 8' AGL/11' MSL. Multiple trees beginning 1769' from departure end of runway, 276' left of centerline, up to 30' AGL/156' MSL. **Rwy 23**, bush 570' from departure end of runway, 490' right of centerline, 12' AGL/21' MSL. **Rwy 33**, railroad, obstruction lights and trees beginning 160' from departure end of runway, crossing centerline, up to 20' AGL/88' MSL. Multiple trees, obstruction lights and tanks beginning 4475' from departure end of runway, 1397' left of centerline, up to 55' AGL/226' MSL.

**HARTFORD, CT**

HARTFORD-BRAINARD

TAKE-OFF MINIMUMS: **Rwys 11, 29**, NA

DEPARTURE PROCEDURE: **Rwy 2**, climb runway heading to 1000 before proceeding on course. **Rwy 20**, climb to 1900 via heading 175° before proceeding on course.

NOTE: **Rwy 2**, 100' AGL treeline 169' from departure end of runway, right of centerline to 2545' from departure end of runway, 191' left of centerline. **Rwy 20**, 100' AGL treeline 1290' from departure end of runway, 497' right of centerline to 2503' from departure end of runway, 32' left of centerline.

**HAVERHILL, NH**

DEAN MEMORIAL

TAKE-OFF MINIMUMS: **Rwy 1**, std. w/ min. climb of 339' per NM to 2000, or 1800-2 for climb in visual conditions. **Rwy 19**, NA terrain.

DEPARTURE PROCEDURE: **Rwy 1**, climbing left turn heading 240° and LEB VOR/DME R-029 to 4800 before proceeding on course. Do not exceed 180 KIAS until established on LEB VOR/DME R-029. For climb in visual conditions: Cross Dean Memorial Airport southwest bound at or above 2200 via LEB VOR/DME R-036 to 5000 before proceeding on course. Do not exceed 180 KIAS until established on LEB VOR/DME R-036.

NOTE: **Rwy 1**, multiple buildings beginning 180' from departure end of runway, 74' left of centerline, up to 25' AGL/571' MSL. Building 300' from departure end of runway, 100' right of centerline, 35' AGL/584' MSL. Vehicles at departure end of runway, beginning 500' right of centerline, to 500' left of centerline 15' AGL/596' MSL. Multiple trees beginning 1450' from departure end of runway left and right of centerline, up to 100' AGL/599' MSL. Multiple trees beginning 1.3 NM from departure end of runway left and right of centerline, up to 100' AGL/819' MSL. Multiple trees and towers beginning 1.7 NM from departure end of runway left and right of centerline, up to 200' AGL/919' MSL.



**HIGHGATE, VT****FRANKLIN COUNTY STATE**

NOTE: **Rwy 19**, trees 979' from departure end of runway, 604' right of centerline, 77' AGL/294' MSL. Trees 1008' from departure end of runway, 600' right of centerline, 83' AGL/300' MSL.

**HOPEDALE, MA****HOPEDALE INDUSTRIAL PARK**

TAKE-OFF MINIMUMS: **Rwy 18**, 300-1 or std. with a min. climb of 320' per NM to 900. **Rwy 36**, 600-1 or std. with a min. climb of 280' per NM to 1100.

DEPARTURE PROCEDURE: **Rwy 18**, climb runway heading to 900 before turning on course. **Rwy 36**, climb runway heading to 1100 before turning on course.

**HOULTON, ME****HOULTON INTL**

TAKE-OFF MINIMUMS: **Rwys 1, 5**, 300-1.

**Rwy 19**, 500-1. **Rwy 23**, 300-1 or std. with a min. climb of 220' per NM to 700.

**HYANNIS, MA****BARNSTABLE MUNI-BOARDMAN/POLANDO FIELD (HYA)****AMDT 3A 08269 (FAA)**

TAKE-OFF MINIMUMS: **Rwy 33**, 300-1 or std. with a min. climb of 354' per NM to 300.

DEPARTURE PROCEDURE: **Rwys 24, 33**, climb runway heading to 700 before proceeding on course.

NOTE: **Rwy 33**, pole 3961' from departure end of runway, 1531' right of centerline, 97' AGL/235' MSL.

**JAFFREY, NH****JAFFREY AIRPORT-SILVER RANCH**

TAKE-OFF MINIMUMS: **Rwys 16, 34**, 500-1.

DEPARTURE PROCEDURE: **Rwy 16**, climb to 3000 direct to GDM VOR/DME before proceeding on course.

**Rwy 34**, climbing right turn to 3000 direct to GDM VOR/DME before proceeding on course.

**KEENE, NH****DILLANT-HOPKINS**

TAKE-OFF MINIMUMS: **Rwy 2**, 1200-2. **Rwy 14**, 2200-2 or std. with a min. climb of 450' per NM to 2500. **Rwy 20**, 1000-2 or std. with a min. climb of 320' per NM to 1700. **Rwy 32**, 1600-2.

DEPARTURE PROCEDURE: **Rwy 2**, climb runway heading to 2100, then climbing left turn to assigned altitude direct EEN VORTAC before proceeding on course. **Rwy 14**, climb runway heading to 2500, then climbing right turn to assigned altitude direct EEN VORTAC before proceeding on course. **Rwy 20**, climb direct EEN VORTAC until passing 3000, if not at 3000 or above at EEN VORTAC climb in EEN holding pattern; (NE, right turns, 215° inbound) before proceeding on course. **Rwy 32**, climbing right turn heading 350° to 2100, then climbing left turn to assigned altitude direct EEN VORTAC before proceeding on course.

NOTE: **Rwy 2**, 81' AGL trees 400' from departure end of runway and 500' right of centerline. **Rwy 32**, 89' AGL trees 800' from departure end of runway and 600' right of centerline.

**LACONIA, NH****LACONIA MUNI (LCI)****AMDT 4 09127 (FAA)**

TAKE-OFF MINIMUMS: **Rwy 8**, 600-1 ¾ or std. w/ min. climb of 652' per NM to 1300. **Rwy 26**, 300-1 or std. w/ min. climb of 421' per NM to 900.

DEPARTURE PROCEDURE: **Rwy 8**, climb to 2500 via heading 079° and ENE VORTAC R-315 inbound to 3500 before proceeding on course. **Rwy 26**, climb heading 264° to 2500 before proceeding on course.

NOTE: **Rwy 8**, trees, terrain, and pole beginning 65' from DER, 20' right of centerline, up to 50' AGL/1112' MSL. Trees and terrain beginning 93' from DER, 5' left of centerline, up to 71' AGL/590' MSL. **Rwy 26**, trees and antenna on tower beginning 123' from DER, 42' left of centerline, up to 84' AGL/743' MSL. Trees beginning 2145' from DER, 626' right of centerline, up to 93' AGL/672' MSL.

**LAWRENCE, MA****LAWRENCE MUNI**

TAKE-OFF MINIMUMS: **Rwy 5**, 300-1 or std. with a min. climb of 290' per NM to 400. **Rwy 14**, 300-1 or std. with a min. climb of 430' per NM to 500. **Rwy 23**, 300-1 or std. with a min. climb of 240' per NM to 400. **Rwy 32**, 300-1.

**LEBANON, NH**

LEBANON MUNI (LEB)

AMDT 2 09015 (FAA)

TAKE-OFF MINIMUMS: **Rwy 7**, 300-1 w/ min. climb of 380' per NM to 3100, or 2000-3 for climb in visual conditions. **Rwy 18**, std. w/ min. climb of 380' per NM to 3800, or 2000-3 for climb in visual conditions. **Rwy 25**, std. w/ min. climb of 380' per NM to 3100, or 2000-3 for climb in visual conditions. **Rwy 36**, std. w/ min. climb of 350' per NM to 1800, or 2000-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 7**, climb heading 075° to 1900 before proceeding on course. **Rwy 18**, climb heading 184° to 3100 before proceeding on course. **Rwy 25**, climb heading 255° to 3100 before proceeding on course. **Rwy 36**, climb heading 004° to 1800 before proceeding on course. **Rwys 7, 18, 25, 36**, - for climb in visual conditions: cross Lebanon Muni airport at or above 2500 before proceeding on course.

NOTE: **Rwy 7**, numerous trees beginning 104' from departure end of runway, 255' right of centerline up to 112' AGL/752' MSL. Pole 505' from departure end of runway, 391' right of centerline, 72' AGL/672' MSL. Bush 426' from departure end of runway, 259' right of centerline, 9' AGL/589' MSL. Multiple trees beginning 13' from departure end of runway, 209' left of centerline, up to 100' AGL/1100' MSL. **Rwy 18**, numerous trees, and obstruction light poles beginning 288' from departure end of runway, 107' right of centerline, up to 100' AGL/784' MSL. Numerous trees and obstruction light poles beginning 433' from departure end of runway, 206' left of centerline, up to 82' AGL/962' MSL. Bush 216' from departure end of runway, 471' right of centerline, 16' AGL/619' MSL. **Rwy 25**, multiple trees beginning 340' from departure end of runway, 400' left of centerline, up to 91' AGL/871' MSL. Tree 382' from departure end of runway, 502' right of centerline, 91' AGL/581' MSL.

**Rwy 36**, multiple trees beginning 243' from departure end of runway, 355' left of centerline, up to 81' AGL/581' MSL. Pole 155' from departure end of runway, 505' left of centerline, 30' AGL/590' MSL. Tree 357' from departure end of runway, 511' right of centerline, 83' AGL/583' MSL.

**LINCOLN, ME**

LINCOLN RGNL

TAKE-OFF MINIMUMS: **Rwy 17**, 800-2. **Rwy 35**, 300-1.**LYNDONVILLE, VT**

CALEDONIA COUNTY

TAKE-OFF MINIMUMS: **Rwy 2**, 500-2.

DEPARTURE PROCEDURE: **Rwy 2**, climb heading 024° to 2500, then climbing right turn via heading 190° and LLX bearing 040° to LLX NDB, then via LLX NDB 220° bearing to 4200 before proceeding on course. **Rwy 20**, climb heading 190°, then climbing left turn on 165° bearing from LLX NDB to 3400 before proceeding on course.

NOTES: **Rwy 2**, multiple trees beginning 795' from departure end of runway, 361' left of centerline, up to 80' AGL/1536' MSL. Terrain 184' from departure end of runway, 533' left of centerline, 1200' MSL. Terrain 346' from departure end of runway, 578' left of centerline, 1220' MSL. Terrain 550' from departure end of runway, 638' left of centerline, 1240' MSL. **Rwy 20**, multiple trees beginning 2' from departure end of runway, 174' right of centerline, up to 80' AGL/1261' MSL. Terrain 470' from departure end of runway, 75' left of centerline, 1200' MSL.

**MACHIAS, ME**

MACHIAS VALLEY

TAKE-OFF MINIMUMS: **Rwy 18**, 400-2 or std. with a min. climb of 350' per NM to 700. **Rwy 36**, 400-2 or std. with a min. climb of 370' per NM to 600.

NOTE: **Rwy 18**, numerous terrain/trees right and left of runway centerline within 8000' from departure end of runway, up to 100' AGL/479' MSL. **Rwy 36**, numerous terrain/trees left and right of runway centerline within 15000' of departure end of runway, up to 100' AGL/439' MSL. Tower 7929' from departure end of runway 883' left of centerline, 85' AGL/403' MSL.

**MANCHESTER, NH**

MANCHESTER (MHT)

AMDT 9 08325 (FAA)

TAKE-OFF MINIMUMS: **Rwy 17**, 300-1½ or std. w/ min. climb of 277' per NM to 600. **Rwy 35**, 300-1½ or std. w/ min. climb of 253' per NM to 500.

DEPARTURE PROCEDURE: **Rwy 6**, climb heading 058° to 1000 before turning right. **Rwy 24**, climb heading 245° to 900 before proceeding on course. **Rwy 35**, climb heading 353° to 1300 before turning left.

NOTE: **Rwy 6**, trees beginning 238' from departure end of runway, 266' left of centerline, up to 108' AGL/308' MSL. Trees beginning 272' from departure end of runway, 378' right of centerline, up to 67' AGL/277' MSL. **Rwy 17**, trees, poles, and buildings beginning 761' from departure end of runway, 4' right of centerline, up to 98' AGL/433' MSL. Sign, pole, trees, and buildings beginning 976' from departure end of runway, 2' left of centerline, up to 108' AGL/457' MSL. **Rwy 24**, trees beginning 810' from departure end of runway, 424' left of centerline, up to 123' AGL/293' MSL. **Rwy 35**, tree and poles beginning 719' from departure end of runway, 558' right of centerline, up to 51' AGL/281' MSL. Pole and trees beginning 891' from departure end of runway, 527' left of centerline, up to 80' AGL/414' MSL.

**MANSFIELD, MA**

MANSFIELD MUNI

TAKE-OFF MINIMUMS: **Rwy 32**, 300-1. **Rwys 4, 22**, NA.



**MARSHFIELD, MA**

MARSHFIELD MUNI-GEORGE HARLOW  
FIELD

TAKE-OFF MINIMUMS: **Rwy 24**, 300-2¾ or std. w/ min. climb of 234' per NM to 400.

NOTE: **Rwy 6**, multiple trees beginning 715' from departure end of runway, 163' left of centerline, up to 60' AGL/69' MSL, boat mast 2608' from departure end of runway on centerline, 125' AGL/125' MSL. **Rwy 24**, multiple trees beginning 221' from departure end of runway, 541' left of centerline, up to 60' AGL/69' MSL, trees beginning 810' from departure end of runway, 26' right of centerline, up to 60' AGL/69' MSL, multiple trees beginning 3077' from departure end of runway, 1022' left of centerline, up to 200' AGL/299' MSL, multiple trees beginning 9899' from departure end of runway, 493' left of centerline, up to 200' AGL/289' MSL, multiple trees beginning 1039' from departure end of runway, 1177' right of centerline, 200' AGL/299' MSL.

**MERIDEN, CT**

MERIDEN MARKHAM MUNI

TAKE-OFF MINIMUMS: **Rwy 18**, 500-3 or std. w/ min. climb of 235' per NM to 1100. **Rwy 36**, std. w/ min. climb of 420' per NM to 1600, or 1500-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 18**, climb heading 176° to 1100 before proceeding on course. **Rwy 36**, climbing left turn heading 320° to 1600 before proceeding on course, or for climb in visual conditions, cross Meriden Markham Municipal at or above 1500 before proceeding on course.

NOTE: **Rwy 18**, 200' AAO 1.9 NM from departure end of runway, 3441' left of centerline, 200' AGL/417' MSL. 200' AAO 1.9 NM from departure end of runway, 3563' left of centerline, 200' AGL/417' MSL. Terrain 50' from departure end of runway, 440' right of centerline, 109' MSL. 200' AAO 1.9 NM from departure end of runway, 3346' left of centerline, 200' AGL/410' MSL. Terrain 122' from departure end of runway, 223' right of centerline, 105' MSL. 200' AAO 2.5 NM from departure end of runway, 1984' left of centerline, 200' AGL/483' MSL. 200' AAO 2.5 NM from departure end of runway, 1889' left of centerline, 200' AGL/489' MSL. Multiple powerlines beginning 500' from departure end of runway, 216' right of centerline, up to 52' AGL/172' MSL. Multiple powerlines beginning 781' from departure end of runway, 192' left of centerline, up to 52' AGL/150' MSL. **Rwy 36**, multiple towers 3 NM from departure end of runway, 2284' right of centerline, up to 1117' AGL/1220' MSL. Multiple terrain/AAO 2.5 NM from departure end of runway, 3748' right of centerline, up to 200' AGL/903' MSL.

**MILLINOCKET, ME**

MILLINOCKET MUNI

TAKE-OFF MINIMUMS: **Rwy 29**, 700-1 or std. with a min. climb of 270' per NM to 1300. **Rwy 34**, 700-1 or std. with a min. climb of 290' per NM to 1300.

**MONTAGUE, MA**

TURNERS FALLS

TAKE-OFF MINIMUMS: **Rwy 16**, 1200-1. **Rwy 34**, 1300-1 or std. with a min. climb rate of 370' per NM to 1900.

**MORRISVILLE, VT**

MORRISVILLE-STOWE STATE

TAKE-OFF MINIMUMS: **Rwy 1**, 2000-2 or std. with a min. climb of 300' per NM to 2400. **Rwy 19**, 2100-3.

DEPARTURE PROCEDURE: **Rwy 1**, climbing right turn direct JRV NDB, continue climb to 2400 via the JRV bearing 050°, then climbing right turn direct to JRV NDB, continue climb in hold (NE, left turns, 230° inbound) to 3500 before proceeding on course. **Rwy 19**, climbing right turn direct JRV NDB and climb in the hold (NE, left turns, 230° inbound) to 3500 before proceeding on course.

NOTE: TAKE-OFF MINIMUMS restricted to CAT A & B aircraft only.

**NANTUCKET, MA**

NANTUCKET MEMORIAL

TAKE-OFF MINIMUMS: **Rwy 12**, 700-1 or std. with a min. climb of 330' per NM to 800.

DEPARTURE PROCEDURE: **Rwys 6, 12, 15, 24, 30, 33**, climb runway heading to 800 before proceeding on course.

NOTE: **Rwy 33**, 70' AGL ant. on building 954' from departure end of runway, 585' right of centerline.

**NASHUA, NH**

BOIRE FIELD

DEPARTURE PROCEDURE: **Rwy 32**, climb heading 319° to 900 before proceeding on course.

NOTE: **Rwy 14**, REIL, multiple poles, and multiple trees beginning 18' from departure end of runway, 60' left of centerline, up to 99' AGL/289' MSL. Pole, REILS, and multiple trees beginning 20' from departure end of runway, 97' right of centerline, up to 89' AGL/283' MSL. **Rwy 32**, multiple trees beginning 340' from departure end of runway, 249' left of centerline, up to 87' AGL/296' MSL. Multiple trees beginning 1694' from departure end of runway, 191' right of centerline, up to 87' AGL/295' MSL.

**NEW BEDFORD, MA**

NEW BEDFORD RGNL

TAKE-OFF MINIMUMS: **Rwy 14**, 300-1 or std. with a min. climb of 280' per NM to 300. **Rwy 32**, 300-1 or std. with a min. climb of 270' per NM to 300.

**NEW HAVEN, CT**

TWEED-NEW HAVEN

TAKE-OFF MINIMUMS: **Rwy 2**, 300-1. **Rwy 14**, 300-1 or std. with a min. climb of 340' per NM until 200. **Rwy 20**, 300-1 or std. with a min. climb of 240' per NM until 100.

**Rwy 32**, 400-1 or std. with a min. climb of 420' per NM until 500.

**NEWPORT, RI**

NEWPORT STATE (UUU)  
AMDT 3 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwy 4**, 300-2½ or std. with a min. climb of 230' per NM to 600, or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 2100' prior to departure end of runway. **Rwy 16**, 200-1 or std. w/min. climb of 430' per NM to 400.

DEPARTURE PROCEDURE: **Rwy 4**, climb heading 039° to 1200 before proceeding on course.

NOTE: **Rwy 4**, trees beginning 1.7 NM from departure end of runway, 916' right of centerline, up to 100' AGL/459' MSL. **Rwy 16**, tower 3782' from departure end of runway, 666' right of centerline, 100' AGL/285' MSL, tower 4203' from departure end of runway, 1100' right of centerline, 132' AGL/310' MSL. **Rwy 34**, terrain 102' from departure end of runway, 424' right of centerline, 159' MSL, vehicle on road 726' from departure end of runway, 602' right of centerline.

**NEWPORT, VT**

NEWPORT STATE

TAKE-OFF MINIMUMS: **Rwy 5**, 1000-3 or std. with a min. climb of 500' per NM to 2900. **Rwy 23**, 1000-3 or std. with a min. climb of 410' per NM to 2900.

DEPARTURE PROCEDURE: **Rwy 5**, climb direct EFK NDB. Climb in hold to 5000 before proceeding on course. **Rwys 18, 23**, climb to 1400, then climbing left turn direct EFK NDB to cross EFK NDB at or above 2900. Climb in hold to 5000 before proceeding on course. **Rwy 36**, climb to 1400, then climbing right turn direct EFK NDB. Climb in hold to 5000 before proceeding on course.

**NORRIDGEWOCK, ME**

CENTRAL MAINE AIRPORT OF  
NORRIDGEWOCK

TAKE-OFF MINIMUMS: **Rwy 3**, 300-1. **Rwy 15**, 300-1 or std. with a min. climb rate of 300' until passing 700. **Rwy 21**, 1100-2 or std. with a min. climb rate of 210' until passing 1700.

DEPARTURE PROCEDURE: **Rwy 21**, climb runway heading to 800 before turning southeast. **Rwy 33**, climbing right turn direct AUG VOR/DME before proceeding on course.

**NORTH KINGSTOWN, RI**

QUONSET STATE

TAKE-OFF MINIMUMS: **Rwy 5**, 300-1 or std. with a min. climb of 320' per NM to 300. **Rwy 16**, 300-1 or std. with a min. climb of 250' per NM to 300.

**NORTHAMPTON, MA**

NORTHAMPTON

TAKE-OFF MINIMUMS: **Rwy 14**, 1300-2. **Rwy 32**, 1700-2 or std. with a min. climb of 330' per NM to 2000.

DEPARTURE PROCEDURE: **Rwy 14**, climb runway heading to 1300 before proceeding on course. **Rwy 32**, climb runway heading to 2000 before proceeding on course.

NOTE: **Rwy 14**, 80' AGL trees 7510' from departure end of runway, 2242' right of centerline.

**NORWOOD, MA**

NORWOOD MEMORIAL (OWD)  
AMDT 5 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwy 10**, 300 - 2 ½ or std. w/min. climb of 340' per NM to 400. **Rwy 17**, 300 - 2½ or std. w/min. climb of 220' per NM to 400, or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1600' prior to DER. **Rwy 28**, 400 - 2 or std. w/min. climb of 385' per NM to 400. **Rwy 35**, 300 - 2 or std. w/min. climb of 230' per NM to 500, or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 2100' prior to DER.

DEPARTURE PROCEDURE: **Rwy 10**, climb heading 104° to 1100 before turning north. **Rwy 28**, climb heading 284° to 700 before turning north. **Rwy 35**, climb heading 335° to 1900 before turning east.

NOTE: **Rwy 10**, trees and bushes beginning abeam DER, 177' right of centerline, up to 100' AGL/178' MSL. Tree 4488' from DER, 911' right of centerline, up 100' AGL/237' MSL. Tree 5428' from DER, 1946' right of centerline, 100' AGL/267' MSL. Trees beginning abeam DER, 34' left of centerline, up to 100' AGL/149' MSL. Tree 1.90 NM from DER 2124' left of centerline, 100' AGL/346' MSL. **Rwy 17**, trees beginning 42' from DER, 248' left of centerline, up to 78' AGL/126' MSL. Tree 1.2 NM from DER, 2183' left of centerline, 100' AGL/257' MSL. Trees beginning 612' from DER, 155' right of centerline, up to 100' AGL/198' MSL. Tree 1.8 NM from DER, 3301' right of centerline, 100' AGL/346' MSL. **Rwy 28**, trees beginning 594' from DER, 41' left of centerline, up to 70' AGL/188' MSL. Building 173' from DER, 514' left of centerline, 30' AGL/79' MSL. Stack, spire, rod on stack, light, antenna, and power poles beginning 202' from DER, 211' left of centerline, up to 99' AGL/335' MSL. Building 173' from DER, 514' left of centerline, 30' AGL/79' MSL. Vehicle on highway 1499' from DER, 877' left of centerline, 17' AGL/105' MSL. Spire, pole, antenna on tank, and antenna on spire beginning 1225' from DER, 301' right of centerline, up to 70' AGL/335' MSL. Vehicle on highway 1,316' from DER, 459' right of centerline, 17' AGL/85' MSL. Building 1016' from DER 59' right of centerline, 30' AGL/89' MSL. Tower 4466' from DER, 238' right of centerline, 157' AGL/262' MSL. Tree 1.7 NM from DER, 673' right of centerline, 100' AGL/365' MSL. Trees 549' from DER, 49' right of centerline, up to 70' AGL/188' MSL. **Rwy 35**, trees beginning 647' from DER, 36' left of centerline, up to 74' AGL/133' MSL. Tree 1.4 NM from DER, 2382' left of centerline, up to 100' AGL/306' MSL. Tree 1.7 NM from DER, 2657' left of centerline, up to 100' AGL/316' MSL. Buildings 1994' from DER, 1031' left of centerline, up to 70' AGL/129' MSL. Trees beginning 694' from DER, 60' right of centerline, up to 73' AGL/125' MSL. Poles beginning 5686' from DER, 769' right of centerline, up to 148' AGL/216' MSL.



## OLD TOWN, ME

### DEWITT FIELD OLD TOWN MUNI

NOTE: **Rwy 4**, trees beginning 61' from departure end of runway, 337' right of centerline, up to 80' AGL/239' MSL. Trees beginning 281' from departure end of runway 363' left of centerline, up to 80' AGL/199' MSL. **Rwy 12**, trees beginning 338' from departure end of runway, 33' right of centerline, up to 80' AGL/259' MSL. **Rwy 22**, trees beginning 223' from departure end of runway, 296' left of centerline, up to 80' AGL/239' MSL. Trees beginning 514' from departure end of runway, 184' right of centerline, up to 80' AGL/209' MSL. **Rwy 30**, trees beginning 952' from departure end of runway, 55' left of centerline, up to 80' AGL/199' MSL.

## ORANGE, MA

### ORANGE MUNI

TAKE-OFF MINIMUMS: **Rwys 1,14,19,32**, 800-1.  
DEPARTURE PROCEDURE: Depart over the airport at 1300, climb to 3500 direct GDM VOR/DME, depart GDM VOR/DME at assigned enroute altitude.

## OXFORD, CT

### WATERBURY-OXFORD

TAKE-OFF MINIMUMS: **Rwy 36**, 300-1 or std. w/a min. climb of 240' per NM to 1000, alternatively, w/ std. takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1900' prior to departure end of runway.

NOTE: **Rwy 18**, multiple trees and transmission towers beginning 510' from departure end of runway, 595' left of centerline, up to 100' AGL/777' MSL. Tree 2157' from departure end of runway, 154' from centerline, up to 100' AGL/735' MSL. **Rwy 36**, multiple trees and terrain beginning 464' from departure end of runway, 535' from centerline, up to 100' AGL/881' MSL. Tree 54' from departure end of runway, 450' left of centerline, up to 100' AGL/736' MSL. Tree 618' from departure end of runway, 369' left of centerline, up to 100' AGL/745' MSL.

## OXFORD, ME

### OXFORD COUNTY RGNL

TAKE-OFF MINIMUMS: **Rwy 15**, 600-3 or 1800-2½ for climb in visual conditions. **Rwy 33**, std. w/ min. climb of 475' per NM to 2000, or 1800-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 15**, climb heading 149° to 1300 before proceeding on course or for climb in visual conditions cross Oxford County Rgnl Airport at or above 2000 before proceeding on course. **Rwy 33**, climb heading 329° to 2000 before proceeding on course or for climb in visual conditions cross Oxford County Rgnl Airport at or above 2000 before proceeding on course.

NOTE: **Rwy 15**, multiple trees beginning 3607' from departure end of runway, 572' left of centerline, up to 100' AGL/679' MSL. Multiple assumed obstacles beginning 1.7 NM from departure end of runway, 1478' left of centerline, up to 200' AGL/849' MSL. **Rwy 33**, multiple trees beginning 4121' from departure end of runway, 70' left of centerline, up to 100' AGL/499' MSL. Multiple trees beginning 5446' from departure end of runway, 239' right of centerline, up to 100' AGL/719' MSL. Multiple assumed obstacles beginning 1.6 NM from departure end of runway, 393' right of centerline, up to 200' AGL/1079' MSL.

## PAWTUCKET, RI

### NORTH CENTRAL STATE (SFZ)

### AMDT 3 09127 (FAA)

NOTE: **Rwy 5**, tree 105' from DER, 233' right of centerline, 15' AGL/434' MSL. Wind sock 2' from DER, 233' right of centerline, 15' AGL/426' MSL. Bush 41' from DER, 250' left of centerline, 14' AGL/428' MSL. Tree 470' from DER, 294' left of centerline, 14' AGL/433' MSL. **Rwy 15**, trees beginning 149' from DER, 218' left of centerline, up to 99' AGL/500' MSL. Multiple trees beginning 70' from DER, 129' right of centerline, up to 99' AGL/593' MSL. **Rwy 23**, multiple trees beginning 145' from DER, 252' left of centerline, up to 30' AGL/449' MSL. **Rwy 33**, multiple trees beginning 24' from DER, 120' right of centerline, up to 69' AGL/494' MSL. Multiple trees beginning 142' from DER, 41' left of centerline, up to 69' AGL/464' MSL.

## PITTSFIELD, MA

### PITTSFIELD MUNI

TAKE-OFF MINIMUMS: **Rwys 14, 32**, NA.  
**Rwy 8**, 1100-2 or std. with a min. climb of 270' per NM to 2500. **Rwy 26**, 800-2 or std. with a min. climb of 360' per NM to 2100.  
DEPARTURE PROCEDURE: **Rwy 8**, climb runway heading to 2000, then climbing right turn via CTR R-331 to 3000 before proceeding on course. **Rwy 26**, climb runway heading to 2400 before proceeding on course.  
NOTE: **Rwy 8**, 120' AGL tree 370' from departure end of runway, 533' right of centerline.

## PITTSFIELD, ME

### PITTSFIELD MUNI

TAKE-OFF MINIMUMS: **Rwys 1, 19**, 300-1.

## PLYMOUTH, MA

### PLYMOUTH MUNI

TAKE-OFF MINIMUMS: **Rwy 6**, 300-1 or std. with a min. climb of 390' per NM to 500. **Rwys 15, 300-1**. **Rwy 24**, 300-1 or std. with a min. climb of 220' per NM to 400. **Rwy 33**, 300-1 or std. with a min. climb of 210' per NM to 400.  
DEPARTURE PROCEDURE: **Rwy 6**, climb runway heading to 900 before proceeding on course.

## PORTLAND, ME

PORTLAND INTL JETPORT (PWM)  
AMDT 4 08157 (FAA)

TAKE-OFF MINIMUMS: **Rwy 11**, 200-1¼ or std. w/ min. climb of 270' per NM to 400. **Rwy 36**, 400-2¾ or std. w/ min. climb of 265' per NM to 700.

NOTE: **Rwy 11**, trees beginning 6012' from departure end of runway, 2043' left of centerline, up to 100' AGL/248' MSL. Trees beginning 225' from departure end of runway, 540' right of centerline, up to 100' AGL/139' MSL. **Rwy 18**, towers 960' from departure end of runway, 666' right of centerline, up to 86' AGL/152' MSL. Building 1156' from departure end of runway, 758' right of centerline, 70' AGL/121' MSL. Trees beginning 149' from departure end of runway, 309' right of centerline, up to 100' AGL/130' MSL. Trees beginning 1227' from departure end of runway, 404' left of centerline, up to 60' AGL/101' MSL. **Rwy 29**, trees beginning 2294' from departure end of runway, 833' left of centerline, up to 100' AGL/200' MSL. Trees beginning 3000' from departure end of runway, 1195' right of centerline, up to 100' AGL/178' MSL. **Rwy 36**, towers beginning 2.1 NM from departure end of runway, 1368' right of centerline, up to 360' AGL/481' MSL. Trees beginning 22' from departure end of runway, 494' left of centerline, up to 100' AGL/111' MSL. Trees beginning 1280' from departure end of runway, 831' right of centerline, up to 100' AGL/128' MSL. Vehicles on road, light poles, fence and building 20' from departure end of runway, 423' left of centerline, up to 50' AGL/81' MSL.

## PORTSMOUTH, NH

PORTSMOUTH INTERNATIONAL AT PEASE  
DEPARTURE PROCEDURE: **Rwy 16**, use PEASE DEPARTURE.

NOTE: **Rwy 34**, building 519' from departure end of runway, 439' right of centerline, 15' AGL/115' MSL, trees beginning 2752' from departure end of runway, 1090' right of centerline, up to 90' AGL/170' MSL.

## PRESQUE ISLE, ME

NORTHERN MAINE RGNL AIRPORT AT  
PRESQUE ISLE

TAKE-OFF MINIMUMS: **Rwy 1**, 300-1 or std. with a min. climb of 360' per NM to 900. **Rwy 10**, 300-1 or std. with a min. climb of 250' per NM to 900. **Rwy 19**, 800-1 or std. with a min. climb of 230' per NM to 1600.

DEPARTURE PROCEDURE: **Rwy 1**, climb runway heading to 1200 before proceeding on course. **Rwy 10**, climb runway heading to 1700 before proceeding on course.

## PRINCETON, ME

PRINCETON MUNI

DEPARTURE PROCEDURE: **Rwy 24**, climbing right turn direct PNN VOR/DME before proceeding on course.

## PROVIDENCE, RI

THEODORE FRANCIS GREEN STATE

TAKE-OFF MINIMUMS: **Rwy 34**, std. w/ a min. climb of 269' per NM to 500, or 300-2 w/ a min. climb of 250' per NM to 1200, or 1000-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 34**, for climb in visual conditions: cross Theodore Francis Green State Airport at or above 900 MSL before proceeding on course.

NOTE: **Rwy 5**, multiple trees beginning 1272' from departure end of runway, 506' left of centerline, up to 50' AGL/109' MSL. Multiple trees beginning 1541' from departure end of runway, 738' right of centerline, up to 73' AGL/123' MSL. **Rwy 16**, multiple trees beginning 85' from departure end of runway, 98' right of centerline, up to 36' AGL/105' MSL. Multiple trees beginning 364' from departure end of runway, 127' left of centerline, up to 68' AGL/112' MSL. Multiple light poles beginning 2797' from departure end of runway, 914' right of centerline, up to 66' AGL/110' MSL. Antenna 3890' from departure end of runway, 1352' right of centerline, 91' AGL/151' MSL. Tower 3931' from departure end of runway, 1377' right of centerline, 77' AGL/137' MSL. **Rwy 34**, vent 105' from departure end of runway, 310' right of centerline, 47' AGL/76' MSL. Blast fence 211' from departure end of runway, 209' left of centerline, 7' AGL/61' MSL. Pole 312' from departure end of runway, 279' right of centerline, 20' AGL/80' MSL. Multiple trees beginning 352' from departure end of runway, 484' right of centerline, up to 79' AGL/136' MSL. Obstruction light 400' from departure end of runway, 189' left of centerline, 15' AGL/74' MSL. Vent 546' from departure end of runway, 518' left of centerline, 26' AGL/85' MSL. Multiple poles beginning 593' from departure end of runway, 245' left of centerline, up to 68' AGL/97' MSL. Multiple trees beginning 1233' from departure end of runway, 112' left of centerline, up to 79' AGL/132' MSL. Light 710' from departure end of runway, 617' left of centerline, 24' AGL/93' MSL. Tower 9063' from departure end of runway, 2916' right of centerline, 255' AGL/310' MSL.

## PROVINCETOWN, MA

PROVINCETOWN MUNI

NOTE: **Rwy 7**, trees beginning 133' from departure end of runway, 118' right of centerline up to 33' AGL/37' MSL. Trees beginning 165' from departure end of runway, 89' left of centerline up to 33' AGL/47' MSL. **Rwy 25**, bush 376' from departure end of runway, 575' right of centerline, 12' AGL/21' MSL.

## RANGELEY, ME

RANGELEY LAKE SEAPLANE BASE

TAKE-OFF MINIMUMS: **Rwy 6**, NA. **Rwy 24**, 800-2 or std. with a min. climb of 280' per NM to 2500.

DEPARTURE PROCEDURE: **Rwy 6**, NA. **Rwy 24**, climb to 2800 via the 274° bearing to RQM NDB. Climb in RQM NDB holding to 4000 before proceeding on course.

## STEVEN A. BEAN MUNI

TAKE-OFF MINIMUMS: **Rwys 14, 32**, 600-2.

DEPARTURE PROCEDURE: **Rwy 14**, climbing right turn direct RQM NDB to cross at or above 4000 before proceeding on course. **Rwy 32**, climbing left turn direct RQM NDB to cross at or above 4000 before proceeding on course.



# TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

09295

## ROCHESTER, NH

### SKYHAVEN

DEPARTURE PROCEDURE: **Rwy 33**, climb runway heading to 800, then climbing left turn to 3000 via heading 270° and CON VORTAC R-095 before proceeding on course.

## ROCKLAND, ME

### KNOX COUNTY RGNL

TAKE-OFF MINIMUMS: **Rwy 3**, 300-1 or std. with a min. climb of 270' per NM to 2000, or 1100-2½ for climb in visual conditions. **Rwy 31**, std. with a min. climb of 300' per NM to 1300, or 1100-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 3, 31**, for climb in visual conditions: cross Knox County Rgnl at or above 1000' MSL before proceeding on course.

NOTE: **Rwy 3**, multiple trees, bushes, obstruction lights and towers beginning 108' from departure end of runway 433' left of centerline, up to 146' AGL/206' MSL. **Rwy 13**, multiple trees, antennas, and light poles beginning 475' from departure end of runway, 548' left of centerline, up to 80' AGL/155' MSL. **Rwy 21**, multiple trees beginning 284' from departure end of runway, 255' left of centerline, up to 65' AGL/110' MSL. **Rwy 31**, multiple trees beginning 2025' from departure end of runway, 895' right of centerline, up to 74' AGL/115' MSL.

## RUTLAND, VT

### RUTLAND-SOUTHERN VERMONT RGNL (RUT)

#### AMDT 3 09211 (FAA)

TAKE-OFF MINIMUMS: **Rwy 1**, std. w/ min. climb of 439' per NM to 2800, or 3600-3 for climb in visual conditions.

**Rwy 13**, NA-obstacles. **Rwy 19**, std. w/ min. climb of 470' per NM to 3300, or 3600-3 for climb in visual conditions.

**Rwy 31**, std. w/ min. climb of 420' per NM to 4500, or 3600-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 1**, climb via 013° course to DYO NDB, cross DYO NDB at or above 6000, if not at 6000, depart DYO NDB on bearing 325° to 6000 before proceeding on course. For climb in visual conditions: cross Rutland-Southern Vermont Rgnl airport at or above 4300 before proceeding on course.

**Rwy 19**, climb heading 194° to 1400, then climbing right turn via 025° course to DYO NDB, cross DYO NDB at or above 6000, if not at 6000, depart DYO NDB on bearing 325° to 6000 before proceeding on course. For climb in visual conditions: cross Rutland-Southern Vermont Rgnl airport at or above 4300 before proceeding on course. **Rwy 31**, climb heading 329° to 1600, then climbing right turn via 025° course to DYO NDB, cross DYO NDB at or above 6000, if not at 6000, depart DYO NDB on bearing 325° to 6000 before proceeding on course. For climb in visual conditions: cross Rutland-Southern Vermont Rgnl airport at or above 4300 before proceeding on course.

NOTE: **Rwy 1**, tree 46' from DER, 417' left of centerline, 80' AGL/829' MSL. Tree 79' from DER, 424' right of centerline, 80' AGL/805' MSL. **Rwy 19**, trees beginning 391' from DER, 178' left of centerline, up to 80' AGL/864' MSL. Trees beginning 166' from DER, 303' right of centerline, up to 80' AGL/843' MSL. **Rwy 31**, tree 357' from DER, 400' left of centerline, 80' AGL/843' MSL. Road 334' from DER, 94' left of centerline, 20' AGL/799' MSL. Tree 885' from DER, 201' right of centerline, 80' AGL/818' MSL. Tree 891' from DER, 403' right of centerline, 80' AGL/827' MSL.

## SANFORD, ME

### SANFORD RGNL

TAKE-OFF MINIMUMS: **Rwys 25, 32**, 300-1.

DEPARTURE PROCEDURE: **Rwy 25**, climb straight ahead to 1600 before proceeding on course.

**Rwy 32**, climbing right turn to heading 045° to 1600 before proceeding on course.

NOTE: **Rwy 7**, trees beginning 449' from departure end of runway, 250' right of centerline, up to 66' AGL/299' MSL. Trees beginning 83' from departure end of runway, 90' left of centerline, up to 64' AGL/298' MSL.

## SOUTHBRIDGE, MA

### SOUTHBRIDGE MUNI

TAKE-OFF MINIMUMS: **Rwy 2**, 300-1 or std. with a min. climb of 260' per NM until passing 1000.

**Rwys 10, 28** NA.

## SPRINGFIELD, VT

### HARTNESS STATE (SPRINGFIELD)

TAKE-OFF MINIMUMS: **Rwys 5, 11, 29**, NA. **Rwy 23**, 900-3 or std. with a min. climb of 362' per NM to 1700.

DEPARTURE PROCEDURE: **Rwy 23**, climb direct to SXD NDB, climb in SXD NDB holding pattern (SW, right turns, 050° inbound) to 5000 before proceeding on course.

NOTE: **Rwy 23**, numerous trees 863' from departure end of runway, 340' right of centerline, 80' AGL/642' MSL. Trees 1618' from departure end of runway, 900' right of centerline, 80' AGL/658' MSL. Trees 2.4 NM from departure end of runway, 3600' left of centerline, 80' AGL/1262' MSL.

## STOW, MA

### MINUTE MAN AIRFIELD

TAKE-OFF MINIMUMS: **Rwy 21**, 300-1 or std. with a min. climb of 390' per NM to 600. **Rwy 3**, 300-1. **Rwys 12, 30**, NA

DEPARTURE PROCEDURE: **Rwy 21**, climb runway heading to 2000 before proceeding on course.

## TAUNTON, MA

### TAUNTON MUNI-KING FIELD (TAN)

#### AMDT 2 08045 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 22**, NA-Turf runway.

**Rwy 12**, 200-1½ or standard with minimum climb of 362' per NM to 300. **Rwy 30**, 200-1 or std. w/ min climb of 291' per NM to 300.

NOTE: **Rwy 12**, Trees and terrain beginning 61' from departure end of runway, 128' right of centerline, up to 80' AGL/229' MSL. Trees and terrain beginning 93' from departure end of runway, 204' left of centerline, up to 80' AGL/159' MSL. **Rwy 30**, Terrain beginning 147' from departure end of runway, 284' right of centerline, 43' MSL. Trees and terrain beginning 1044' from departure end of runway, 320' left of centerline, up to 80' AGL/199' MSL.

09295



# TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

## VINEYARD HAVEN, MA

### MARTHAS VINEYARD

NOTE: **Rwy 6**, multiple trees beginning 627' from departure end of runway, 652' left of centerline up to 40' AGL/100' MSL. Terrain 143' from departure end of runway, 305' left of centerline, 0' AGL/69' MSL. Tree 1142' from departure end of runway, 747' right of centerline, 58' AGL/98' MSL. **Rwy 15**, light pole 411' from departure end of runway, 475' right of centerline, 47' AGL/97' MSL. Multiple trees beginning 276' from departure end of runway, 385' left of centerline, up to 37' AGL/97' MSL. Multiple trees beginning 411' from departure end of runway, 475' right of centerline, up to 37' AGL/97' MSL. **Rwy 24**, multiple antennas on buildings beginning 486' from departure end of runway, 265' left of centerline, up to 50' AGL/75' MSL. Multiple trees beginning 761' from departure end of runway, 210' left of centerline, up to 24' AGL/84' MSL. Multiple trees beginning 710' from departure end of runway, 402' right of centerline, up to 47' AGL/107' MSL. Terrain beginning 7' from departure end of runway, 459' right of centerline, up to 0' AGL/59' MSL. **Rwy 33**, bush 67' from departure end of runway, 242' right of centerline, 16' AGL/76' MSL. Multiple trees beginning 36' from departure end of runway, 498' left of centerline, up to 47' AGL/107' MSL. Multiple trees beginning 159' from departure end of runway, 347' right of centerline, up to 37' AGL/97' MSL. Terrain beginning 6' from departure end of runway, 111' right of centerline, up to 0' AGL/73' MSL.

## WATERVILLE, ME

### WATERVILLE ROBERT LAFLEUR

TAKE-OFF MINIMUMS: **Rwys 14, 32**, 300-1.

## WEST DOVER, VT

### MOUNT SNOW

TAKE-OFF MINIMUMS: **Rwy 1**, std. with a min. climb of 492' per NM to 6000, or 2200-3 for climb in visual conditions. **Rwy 19**, std. with a min. climb of 236' per NM to 5000, or 2200-3 for climb in visual conditions. DEPARTURE PROCEDURE: **Rwy 1**, climb via VWD NDB 352° bearing to 6000 before proceeding on course. For climb in visual conditions: Maintain 180 knots or less in climb, cross Mount Snow Airport at or above 4500. **Rwy 19**, climb via VWD NDB 191° bearing to 5000 before proceeding on course. For climb in visual conditions: Maintain 180 knots or less in climb, cross Mount Snow Airport at or above 4500. NOTE: **Rwy 1**, brush 200' from departure end of runway, 70' left and right of centerline, 20' AGL/1970' MSL; multiple trees 1200' from departure end of runway, left and right of centerline, 90' AGL/2040' MSL; trees 2813' from departure end of runway, 594' right of centerline, 90' AGL/2156' MSL; trees 2140' from departure end of runway, 326' right of centerline, 90' AGL/2131' MSL; trees 2776' from departure end of runway, 210' right of centerline, 90' AGL/2137' MSL; trees 560' from departure end of runway, 578' right of centerline, 90' AGL/2078' MSL; trees 3351' from departure end of runway, 1056' left of centerline, 90' AGL/2137' MSL. **Rwy 19**, brush 200' from departure end of runway, 100' left and right of centerline, 20' AGL/1968' MSL, trees 1200' from departure end of runway, left and right of centerline, 90' AGL/2038' MSL.

## WESTERLY, RI

### WESTERLY STATE

TAKE-OFF MINIMUMS: **Rwy 25**, 300-1 or std. with a min. climb of 466' per NM to 400. **Rwy 32**, 300-1 or std. with a min. climb of 218' per NM to 300. DEPARTURE PROCEDURE: **All Runways**, climb runway heading to 500 before proceeding on course. NOTE: **Rwy 14**, multiple trees from 20 to 1300' from departure end of runway, 10 to 500' left/right of centerline, ranging from 110 to 173' MSL. **Rwy 25**, multiple trees from 4180 to 6600' from departure end of runway, 10 to 500' left/right of centerline, ranging from 92 to 150' MSL. Water tower 2950' from departure end of runway, 1040' left of centerline, 120' AGL/252' MSL. **Rwy 32**, multiple trees from 30 to 1750' from departure end of runway, 10 to 500' left/right of centerline, ranging from 91 to 155' MSL.

## WESTFIELD, MA

### BARNES MUNI

TAKE-OFF MINIMUMS: **Rwy 15**, 300-2 or std. with a min. climb of 260' per NM to 700. **Rwy 33**, 1200-3 or std. with a min. climb of 250' per NM to 1700. DEPARTURE PROCEDURE: **Rwy 2**, climb runway heading to 1700 before proceeding on course. **Rwy 15**, climb runway heading to 1400 before proceeding on course. **Rwy 20**, climb runway heading to 2200 before proceeding on course. **Rwy 33**, climb runway heading to 1500 before proceeding on course.

## WESTOVER ARB/METROPOLITAN, (KCEF)

### SPRINGFIELD/CHICOPEE, MA

..... Rwy 5, 900-3\*  
03191 ..... Rwy 33, 1400-3\*\*  
\* Or standard with minimum climb of 250/NM to 900.  
\*\* Or standard with minimum climb of 320/NM to 1400.  
RWY 15: 307' tree 1013' from departure end of RWY, 526' left of extended centerline, 294' tree 1268' from departure end of RWY, 619' left of extended centerline, 317' tree 1340' from departure end of RWY, 686' left of extended centerline, 318' tree 1686' from departure end of RWY, 911' left of extended centerline, 305' tree 1911' from departure end of RWY, 832' left of extended centerline, 321' tree 2104' from departure end of RWY, 942' left of extended centerline, 329' tree 2959' from departure end of RWY, 1277' left of extended centerline, 334' tree 3236' from departure end of RWY, 1278' left of extended centerline, 343' tree 3515' from departure end of RWY, 1287' left of extended centerline, 310' tree 2421' from departure end of RWY, 1062' left of extended centerline, 323' tree 2695' from departure end of RWY, 369' right of extended centerline, 321' tree 2796' from departure end of RWY, 608' right of extended centerline, 321' tree 2945' from departure end of RWY, 909' right of extended centerline, 335' tree 3567' from departure end of RWY, 1320' left of extended centerline. RWY 23: 296' tree 1191' from departure end of RWY, 726' left of extended centerline; 289' tree 1704' from departure end of RWY, 202' right of extended centerline; 291' tree 1737' from departure end of RWY, 205' left of extended centerline.



## WHITEFIELD, NH

### MOUNT WASHINGTON RGNL

TAKE-OFF MINIMUMS: **Rwy 10**, 3300-3 or std. with a min. climb of 390' per NM to 4900. **Rwy 28**, 2700-3 or std. with a min. climb of 330' per NM to 4400.

DEPARTURE PROCEDURE: **Rwy 10**, climb runway heading to 2200, then climbing left turn direct GMA NDB. Cross GMA NDB at or above 5000 before proceeding on course. **Rwy 28**, climb direct GMA NDB, climb in holding pattern (W, right turns, 104° inbound) to 5000 before proceeding on course.

NOTE: **Rwy 10**, 67' AGL trees 194' from departure end of runway, 494' left of centerline 67' AGL/1130' MSL. **Rwy 28**, 65' AGL trees 294' from departure end of runway, 517' right of centerline 65' AGL/1096' MSL.

## WILLIMANTIC, CT

### WINDHAM (IJD)

#### AMDT 5 08297 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9**, std. w/ min. climb of 340' per NM to 1100, or 1100-2½ for climb in visual conditions. **Rwy 18**, 300-2 or std. w/ min. climb of 408' per NM to 700. **Rwy 27**, 400-2 or std. w/ min. climb of 290' per NM to 700. **Rwy 36**, std. w/ min. climb of 401' per NM to 1100, or 1100-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 9**, climb heading 089° to 700 before proceeding on course, or for climb in visual conditions cross Windham Airport at or above 1200 before proceeding on course. **Rwy 18**, climb heading 170° to 1200 before turning right. **Rwy 27**, climb heading 269° to 800 before proceeding on course. **Rwy 36**, for climb in visual conditions cross Windham Airport at or above 1200 before proceeding on course.

NOTE: **Rwy 9**, trees beginning 50' from departure end of runway, 118' right of centerline, up to 80' AGL/669' MSL. Pole and trees beginning 284' from departure end of runway, 12' left of centerline, up to 86' AGL/529' MSL. Fence 119' from departure end of runway, 207' left of centerline, 6' AGL/246' MSL. **Rwy 18**, trees beginning 49' from departure end of runway, 16' right of centerline, up to 80' AGL/402' MSL. Trees beginning 317' from departure end of runway, 47' left of centerline, up to 80' AGL/529' MSL. Bush 248' from departure end of runway, 93' left of centerline, 14' AGL/261' MSL. Light standard 415' from departure end of runway, 149' left of centerline 32' AGL/279' MSL. **Rwy 27**, obstacle light on antenna and trees beginning 45' from departure end of runway, 46' left of centerline, up to 99' AGL/299' MSL. Trees beginning 193' from departure end of runway, 230' right of centerline, up to 80' AGL/549' MSL. Obstruction light on localizer, 83' from departure end of runway, on centerline, 8' AGL/247' MSL. **Rwy 36**, trees beginning 150' from departure end of runway, 155' right of centerline, up to 80' AGL/339' MSL. Trees beginning 195' from departure end of runway, 24' left of centerline, up to 80' AGL/559' MSL.

## WINDSOR LOCKS, CT

### BRADLEY INTL (BDL)

#### AMDT 2 08045 (FAA)

TAKE-OFF MINIMUMS: **Rwy 33**, 700-3 or std. w/ min. climb of 326' per NM to 1000.

DEPARTURE PROCEDURE: **Rwy 1**, Climb heading 013° to 1000 before proceeding on course. **Rwy 33**, Climb heading 328° to 1000 before proceeding on course.

NOTES: **Rwy 1**, Trees beginning 887' from departure end of runway, 493' left of centerline, up to 100' AGL/239' MSL. Trees beginning 1846' from departure end of runway, on centerline, up to 100' AGL/265' MSL. **Rwy 6**, Trees beginning 21' from departure end of runway, 464' left of centerline, up to 100' AGL/184' MSL. Trees beginning 1335' from departure end of runway, on centerline, up to 100' AGL/289' MSL. **Rwy 15**, Vehicle on road 453' from departure end of runway, 615' left of centerline, 15' AGL/186' MSL. Trees beginning 2341' from departure end of runway, 767' right of centerline, up to 76' AGL/244' MSL. Vehicle on road 409' from departure end of runway, 591' left of centerline, 15' AGL/186' MSL. Trees beginning 1520' from departure end of runway, 429' right of centerline, up to 77' AGL/219' MSL. **Rwy 19**, Aircraft 1843' from departure end of runway, 223' right of centerline, 40' AGL/269' MSL. Light pole 2843' from departure end of runway, 223' right of centerline, up to 88' AGL/222' MSL. **Rwy 24**, obstruction light fence 1240' from departure end of runway, 784' left of centerline, 50' AGL/215' MSL. Trees beginning 3389' from departure end of runway, 599' left of centerline, up to 100' AGL/267' MSL. Trees beginning 2346' from departure end of runway, 489' right of centerline, up to 70' AGL/273' MSL. **Rwy 33**, Trees beginning 1590' from departure end of runway, on centerline up to 100' AGL/256' MSL. Obstruction light tower 2.4 NM from departure end of runway, 3534' left of centerline 117' AGL/774' MSL. Trees beginning 1618' from departure end of runway, 580' right of centerline, up to 100' AGL/252' MSL. Trees beginning 3125' from departure end of runway, 308' right of centerline, up to 100' AGL/256' MSL.

## WISCASSET, ME

### WISCASSET

TAKE-OFF MINIMUMS: **Rwy 7**, 300-1 or std. with a min. climb of 240' per NM to 600.

## WORCESTER, MA

### WORCESTER RGNL

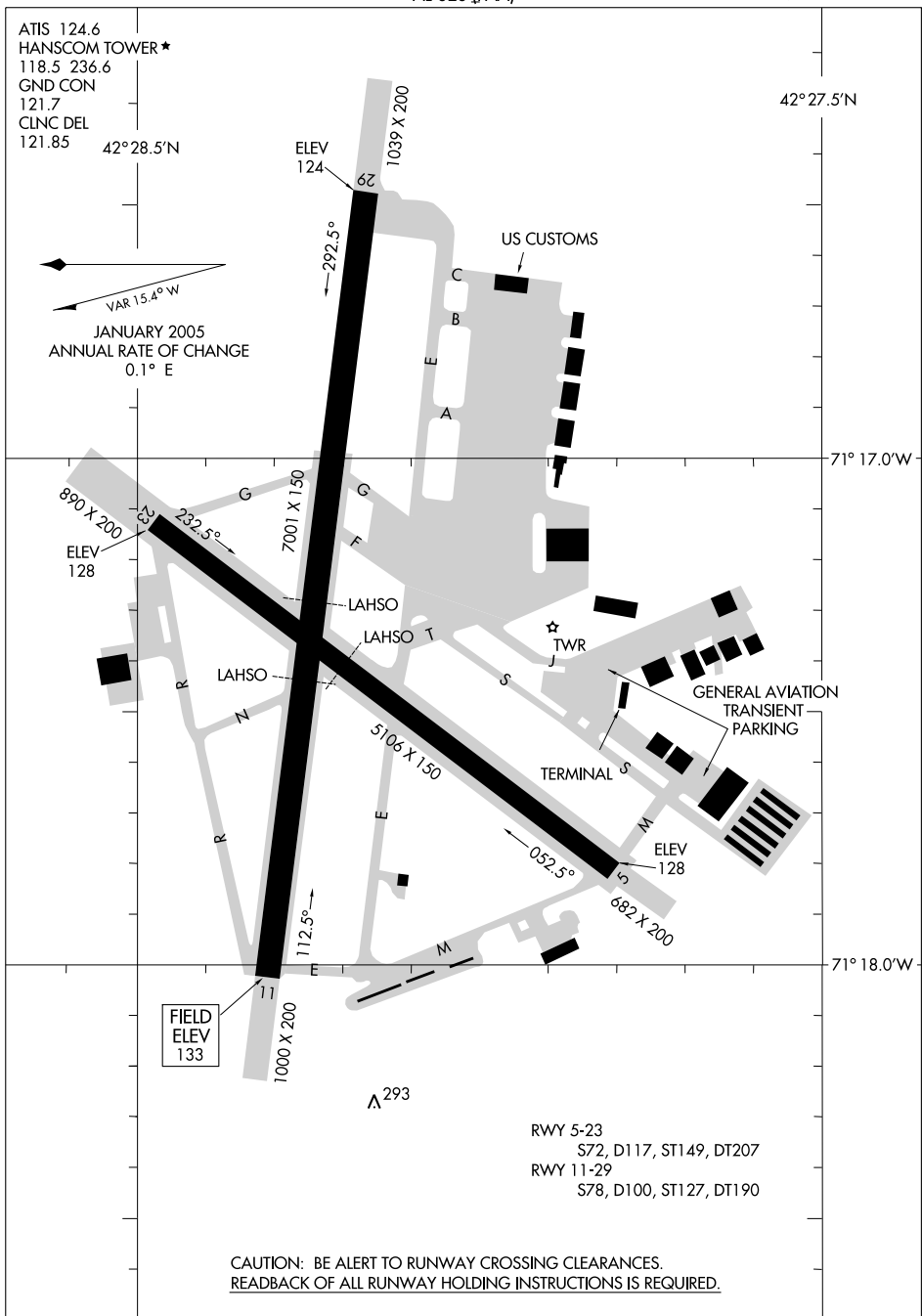
TAKE-OFF MINIMUMS: **Rwy 29**, 300-2 or std. with a min. climb of 250' per NM to 1300. **Rwy 33**, 700-2 or std. with a min. climb of 320' per NM to 2000.

DEPARTURE PROCEDURE: **Rwy 29**, climb runway heading to 1300 before proceeding on course. **Rwy 33**, climb runway heading to 2000 before proceeding on course.



# AIRPORT DIAGRAM

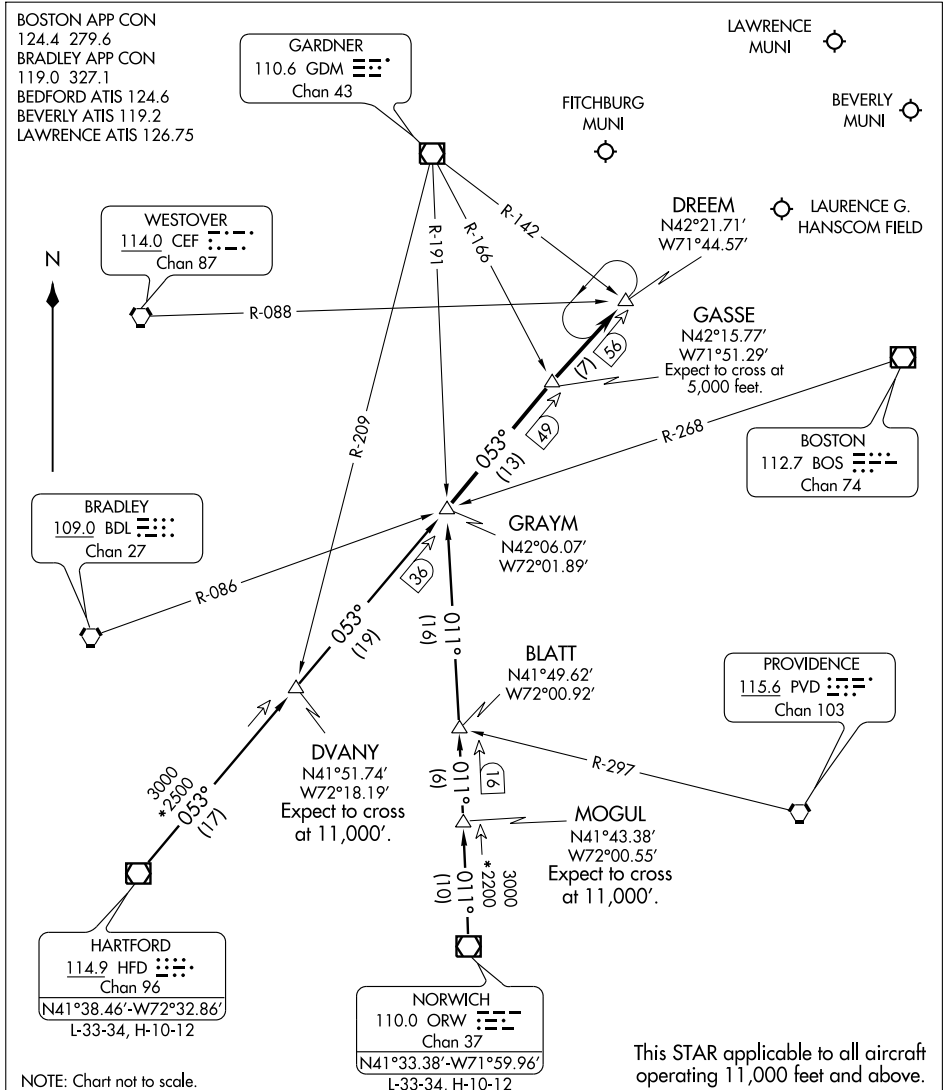
BEDFORD / LAURENCE G. HANSCOM FIELD (BED)  
AL-626 (FAA) BEDFORD, MASSACHUSETTS



## GRAYM TWO ARRIVAL

ST-626 (FAA)

BEDFORD, MASSACHUSETTS



NE-1, 22 OCT 2009 to 19 NOV 2009

HARTFORD TRANSITION (HFD.GRAYM2): From over HFD VOR/DME via HFD R-053 to GRAYM INT. Thence. . .

NORWICH TRANSITION (ORW.GRAYM2): From over ORW VOR/DME via ORW R-011 to GRAYM INT. Thence. . .

. . . From over GRAYM INT via HFD VOR/DME R-053 to DREEM INT, then direct destination airport. Expect radar vectors to final approach course.

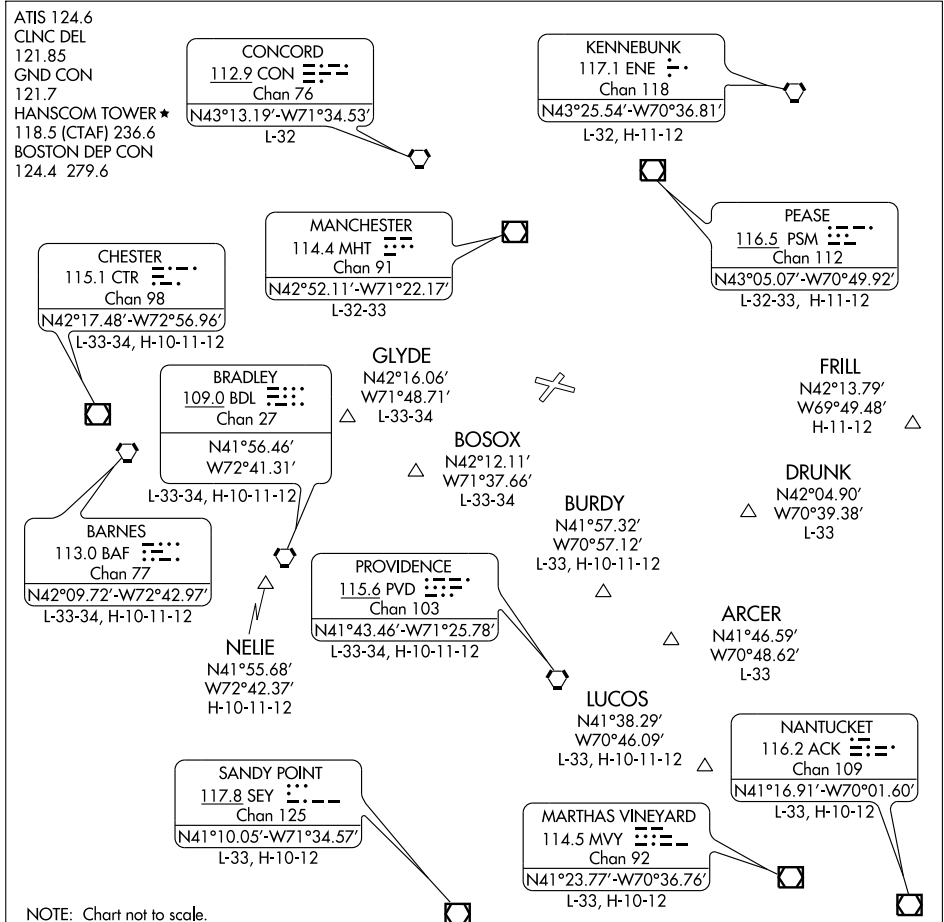
# HANSCOM SIX DEPARTURE

08213

SL-626 (FAA)

BEDFORD/ LAURENCE G. B&amp;D)

BEDFORD, MASSACHUSETTS



NE-1, 22 OCT 2009 to 19 NOV 2009

## DEPARTURE ROUTE DESCRIPTION

All aircraft expect radar vectors to appropriate depicted NAVAID/fix. Maintain 2000'. Expect further clearance to filed altitude/flight level ten minutes after departure.

**TAKE-OFF ALL RUNWAYS:** Heading as assigned by ATC for vectors to assigned NAVAID/fix.



|  |                        |   |
|--|------------------------|---|
| LOC/DME I-BED<br><b>111.15</b><br>Chan <b>48 (Y)</b> | APP CRS<br><b>113°</b> | Rwy Idg <b>7001</b><br>TDZE <b>133</b><br>Apt Elev <b>133</b> |
|--|------------------------|---|

ILS or LOC RWY 11

BEDFORD/LAURENCE G. HANSCOM FIELD (BED)

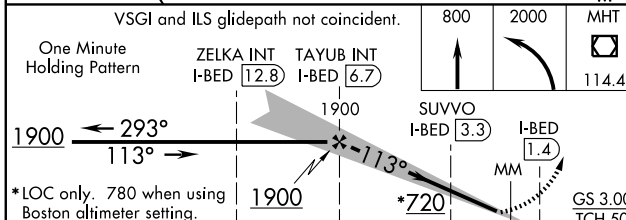
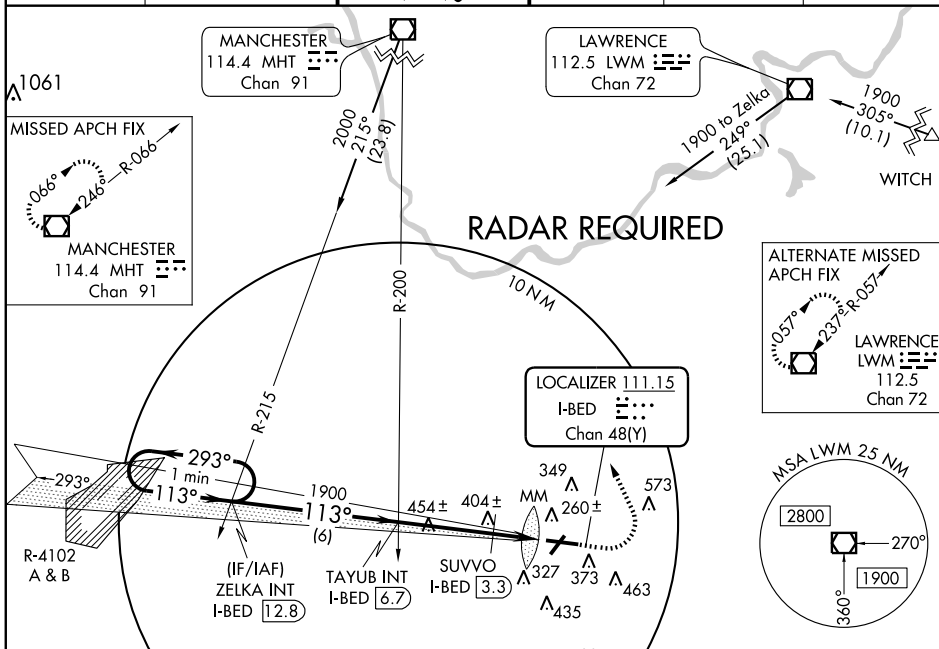
**▼** If local altimeter setting not received, use Boston altimeter setting and increase all DAs/MDAs 60 feet. Inoperative table does not apply to S-ILS 11 all Cats and S-LOC 11 Cats A and B. Visibility reduction by helicopters NA.

MALS

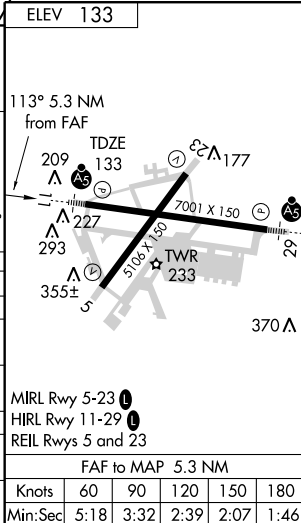


**MISSED APPROACH:** Climb to 800, then climbing left turn to 2000 direct MHT VOR/DME and hold.

|               |                               |   |                  |                    |                  |
|---------------|-------------------------------|---|------------------|--------------------|------------------|
| ATIS<br>124.6 | BOSTON APP CON<br>124.4 279.6 | HANSCOM TOWER ★<br>118.5 (CTAF) 0 236.6 | GND CON<br>121.7 | CLNC DEL<br>121.85 | UNICOM<br>122.95 |
|---------------|-------------------------------|---|------------------|--------------------|------------------|



| CATEGORY           | A                  | B           | C                        | D                      |
|--------------------|--------------------|-------------|--------------------------|------------------------|
| S-ILS 11           | 383/50             |             | 250 (300-1)              |                        |
| S-LOC 11           | 720/50 587 (600-1) |             |                          | 720/60<br>587 (600-1¼) |
| CIRCLING           | 720 - 1            | 587 (600-1) | 720 - 1½<br>587 (600-1½) | 780 - 2<br>647 (700-2) |
| SUVVO FIX MINIMUMS |                    |             |                          |                        |
| S-LOC 11           | 660/50 527 (600-1) |             |                          | 660/60<br>527 (600-1¼) |
| CIRCLING           | 680 - 1            | 547 (600-1) | 700 - 1½<br>567 (600-1½) | 780 - 2<br>647 (700-2) |



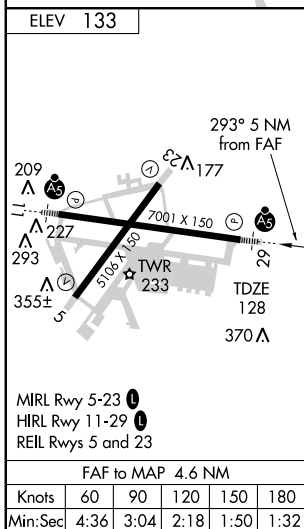
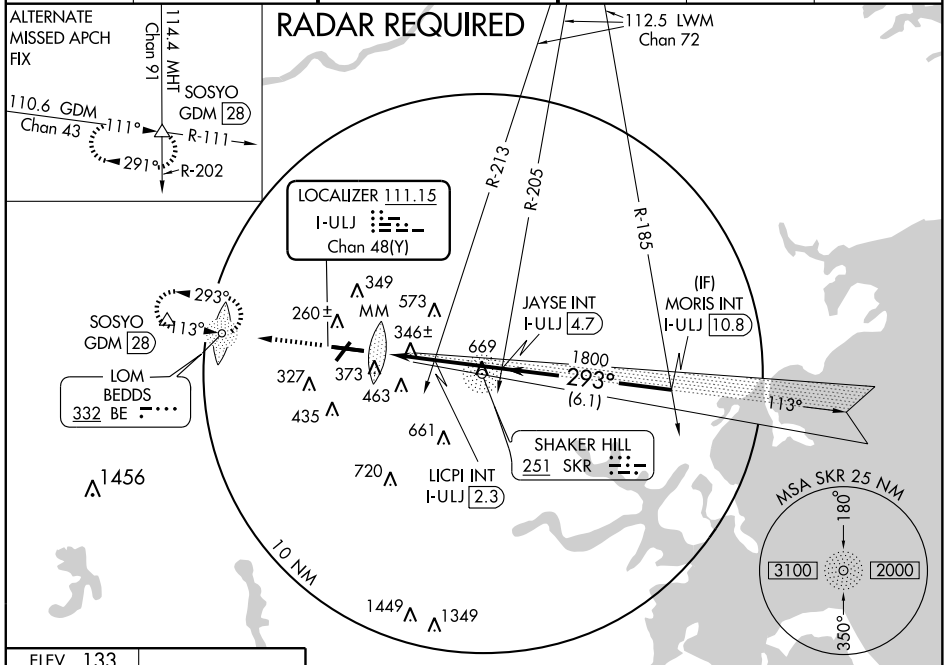
|               |         |          |      |
|---------------|---------|----------|------|
| LOC/DME I-ULJ | APP CRS | Rwy Idg  | 7001 |
| 111.15        | 293°    | TDZE     | 128  |
| Chan 48(Y)    |         | Apt Elev | 133  |


# ILS or LOC RWY 29

BEDFORD/LAURENCE G. HANSCOM FIELD (BED)

|   |              |   |
|---|--------------|---|
| <p>ADF required. VDP NA when using Boston altimeter setting.<br/>If local altimeter setting not received, use Boston altimeter setting and increase all DAs to 377 feet and all MDAs 60 feet.</p> | <p>MALSR</p> | <p>MISSED APPROACH: Climb to 2000 direct BE LOM and hold.</p> |
|---|--------------|---|

|               |                               |  |                  |                    |                  |
|---------------|-------------------------------|--|------------------|--------------------|------------------|
| ATIS<br>124.6 | BOSTON APP CON<br>124.4 279.6 | HANSCOM TOWER★<br>118.5 (CTAF) 0 236.6 | GND CON<br>121.7 | CLNC DEL<br>121.85 | UNICOM<br>122.95 |
|---------------|-------------------------------|--|------------------|--------------------|------------------|



|           |   |                               |                               |                                |
|-----------|---|-------------------------------|-------------------------------|--------------------------------|
| 2000<br>↑ | BE<br><br><u>332</u> | LICPI INT<br>I-ULJ <u>2.3</u> | JAYSE INT<br>I-ULJ <u>4.7</u> | MORIS INT<br>I-ULJ <u>10.8</u> |
|           |   |                               |                               |                                |

NDB SKR

251

APP CRS

297°

Rwy Idg

7001

TDZE

128

Apt Elev

133

NDB RWY 29

BEDFORD/ LAURENCE G. HANSCOM FIELD (BED)

When local altimeter setting not received, use Boston altimeter setting and increase all MDA 60 feet; increase S-29 Cat C and D and Circling Cat C and D visibilities ¼ mile.

MALS

MISSED APPROACH: Climb to 2000 direct BE LOM and hold.

|               |                               |                                      |                  |                    |                  |
|---------------|-------------------------------|--------------------------------------|------------------|--------------------|------------------|
| ATIS<br>124.6 | BOSTON APP CON<br>124.4 279.6 | HANSCOM TOWER★<br>118.5 (CTAF) 236.6 | GND CON<br>121.7 | CLNC DEL<br>121.85 | UNICOM<br>122.95 |
|---------------|-------------------------------|--------------------------------------|------------------|--------------------|------------------|

ALTERNATE MISSED APCH FIX

BOSTON  
112.7 BOS  
Chan 74

MSA SKR 25 NM

ELEV 133

MIRL Rwy 5-23

HIRL Rwy 11-29

REIL Rws 5 and 23

2000

BE

332

Procedure Turn NA

REVER INT

3000

291°

1700

297°

3.30°

TCH 52

4.4 NM

9.7 NM

VGSI and descent angles not coincident.


| CATEGORY | A                 | B | C                   | D                   |
|----------|-------------------|---|---------------------|---------------------|
| S-29     | 780-¾ 652 (700-¾) |   | 780-1¼ 652 (700-1¼) | 780-1¼ 652 (700-1¼) |
| CIRCLING | 780-1 647 (700-1) |   | 780-1¼ 647 (700-1¼) | 800-2 667 (700-2)   |

NE-1: 22 OCT 2009 to 19 NOV 2009

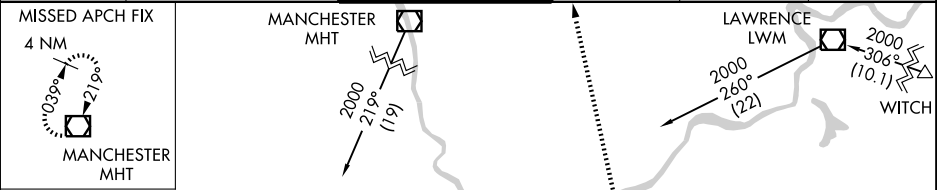
|          |         |          |      |
|----------|---------|----------|------|
| WAAS     | APP CRS | Rwy Idg  | 7001 |
| CH 87000 | 113°    | TDZE     | 133  |
| W11A     |         | Apt Elev | 133  |

RNAV (GPS) RWY 11

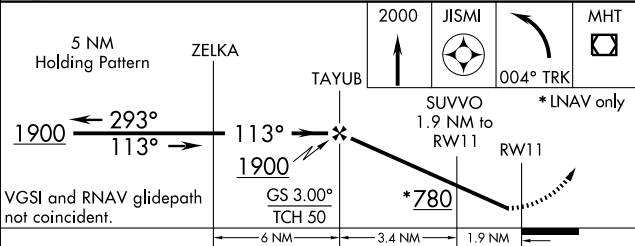
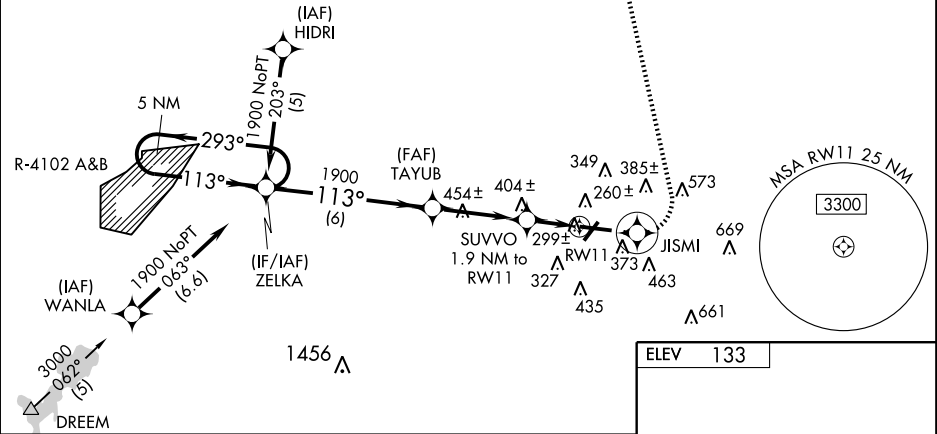
BEDFORD / LAURENCE G. HANSCOM FIELD (BED)

|   |   |  |
|---|---|--|
| <p>If local altimeter setting not received, use Boston altimeter setting and increase all DAs/MDAs 60 feet. For uncompensated Baro-VNAV systems, LNAV-VNAV NA below -15°C (5°F) or above 48°C (119°F). For inoperative MALS, increase LPV all Cnts visibility to RVR 6000. Inoperative table does not apply to LNAV Cnts A and B. Baro-VNAV NA when using Boston altimeter setting. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.</p> | <p>MALS</p>  | <p>MISSED APPROACH: Climb to 2000 direct JISMI and left turn via 004° track to MHT VOR/DME and hold.</p> |
|---|---|--|

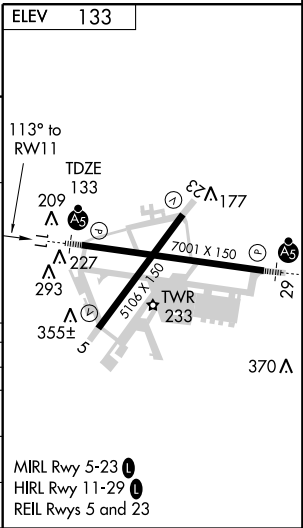
|       |                |                    |         |          |        |
|-------|----------------|--------------------|---------|----------|--------|
| ATIS  | BOSTON APP CON | HANSCOM TOWER*     | GND CON | CLNC DEL | UNICOM |
| 124.6 | 124.4 279.6    | 118.5 (CTAF) 236.6 | 121.7   | 121.85   | 122.95 |



Procedure NA for arrivals at MHT VOR/DME via V106 E bnd.




| CATEGORY     | A                 | B                        | C                      | D |
|--------------|-------------------|--------------------------|------------------------|---|
| LPV DA       |                   | 479/50                   | 346 (400-1)            |   |
| LNAV/VNAV DA |                   | 576/50                   | 443 (500-1)            |   |
| LNAV MDA     | 660/50            | 527 (600-1)              | 660/60<br>527 (600-1¼) |   |
| CIRCLING     | 680-1 547 (600-1) | 700 - 1½<br>567 (600-1½) | 780 - 2<br>647 (700-2) |   |



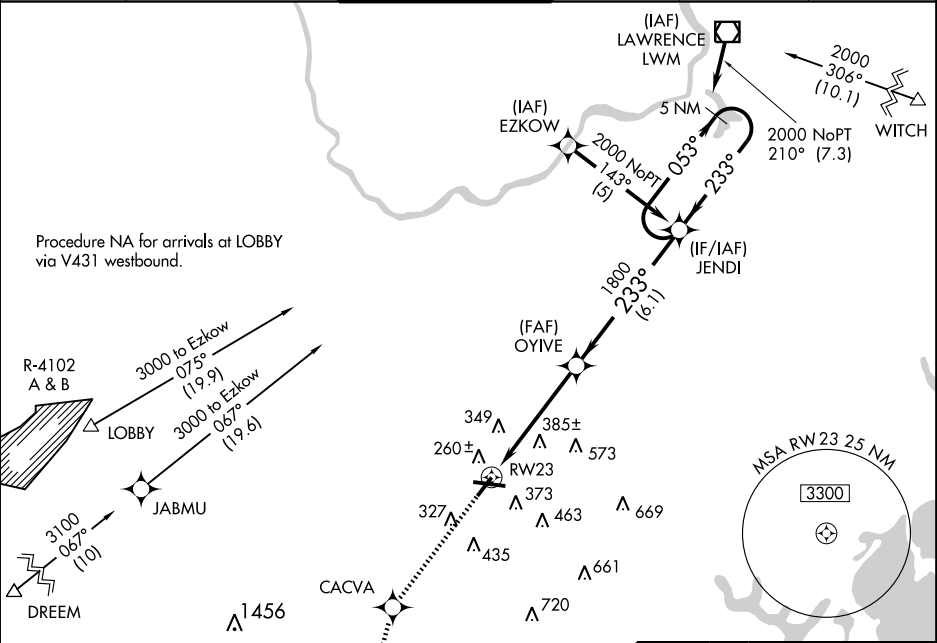
|             |          |             |
|-------------|----------|-------------|
| APP CRS     | Rwy Idg  | <b>5106</b> |
| <b>233°</b> | TDZE     | <b>129</b>  |
|             | Apt Elev | <b>133</b>  |

RNAV (GPS) RWY 23

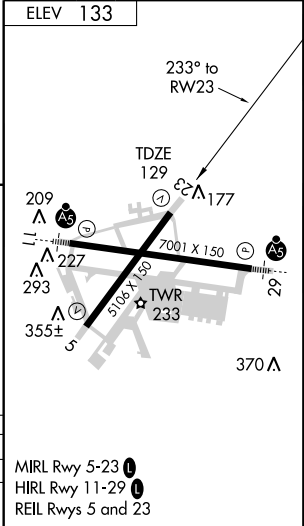
BEDFORD / LAURENCE G. HANSCOM FIELD (BED)

|   |   |   |
|---|---|---|
|  | DME/DME RNP-0.3 NA.<br>If local altimeter setting not received, use Boston altimeter setting and increase all MDAs 60 feet. | MISSED APPROACH: Climb to 3000 direct CACVA and via 211° track to WHYBE and hold. |
|---|---|---|

|                      |                                      |  |                         |                           |                         |
|----------------------|--------------------------------------|--|-------------------------|---------------------------|-------------------------|
| ATIS<br><b>124.6</b> | BOSTON APP CON<br><b>124.4 279.6</b> | HANSCOM TOWER ★<br><b>118.5 (CTAF) 236.6</b> | GND CON<br><b>121.7</b> | CLNC DEL<br><b>121.85</b> | UNICOM<br><b>122.95</b> |
|----------------------|--------------------------------------|--|-------------------------|---------------------------|-------------------------|



|   |       |             |              |              |
|---|-------|-------------|--------------|--------------|
| MISSED APCH FIX                         | 4 NM  | 088°        | 268°         | WHYBE        |
| 3000                                    | CACVA | TRK 211°    | WHYBE        | OYIVE        |
| RWY 23                                  |       |             |              |              |
| JENDI                                   |       |             |              |              |
| 5 NM Holding Pattern                    |       |             |              |              |
| 053° → 2000                             |       |             |              |              |
| ← 233° 1800                             |       |             |              |              |
| 3.04° TCH 53                            |       |             |              |              |
| 5 NM 6.1 NM                             |       |             |              |              |
| VGSi and descent angles not coincident. |       |             |              |              |
| CATEGORY                                | A     | B           | C            | D            |
| LNAV MDA                                | 640-1 | 511 (600-1) | 640-1½       | 511 (600-1½) |
| CIRCLING                                | 680-1 | 547 (600-1) | 700-1½       | 780-2        |
|   |       |             | 567 (600-1½) | 647 (700-2)  |



|  |                        |   |
|--|------------------------|---|
| WAAS<br>CH <b>86612</b><br><b>W29A</b> | APP CRS<br><b>293°</b> | Rwy Idg <b>7001</b><br>TDZE <b>128</b><br>Apt Elev <b>133</b> |
|--|------------------------|---|

RNAV (GPS) RWY 29

BEDFORD/LAURENCE G. HANSCOM FIELD (BED)

**▼** Baro-VNAV NA when using Boston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 48°C (118°F). DME/DME RNP-0.3 NA.

**▲** When local altimeter setting not received, use Boston altimeter setting and increase all DA 48 ft and all MDA 60 ft; increase LNAV/VNAV all Cats, LNAV Cat C and D and Circling Cat C and D visibilities ¼ mile. VDP NA when using Boston altimeter setting.

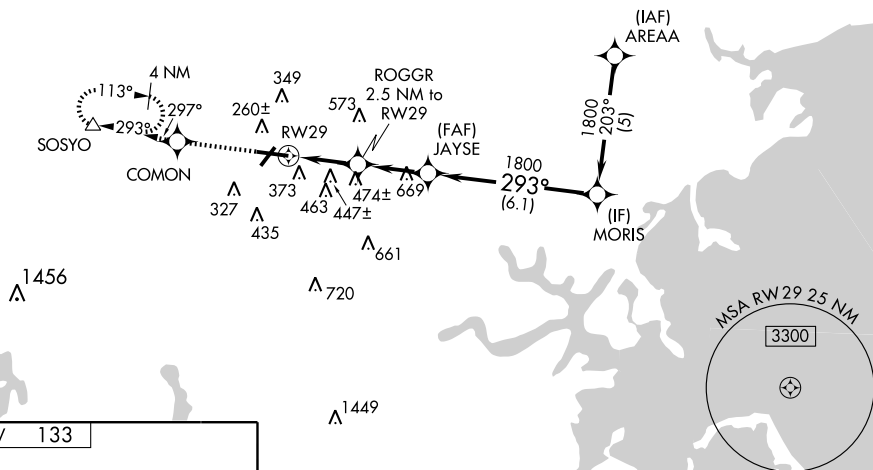
MALSR



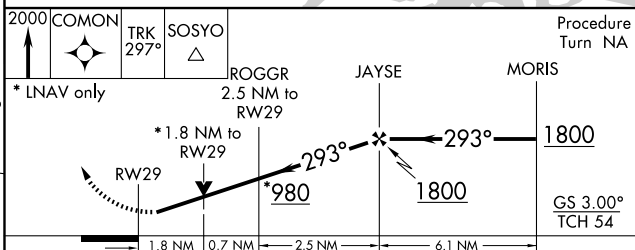
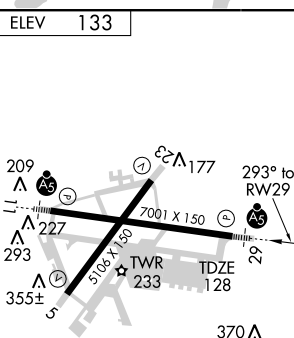
**MISSED APPROACH:**  
Climb to 2000 direct  
COMON and via  
297° track to SOSYO  
and hold.

|                      |                                      |   |                         |                           |                         |
|----------------------|--------------------------------------|---|-------------------------|---------------------------|-------------------------|
| ATIS<br><b>124.6</b> | BOSTON APP CON<br><b>124.4 279.6</b> | HANSCOM TOWER★<br><b>118.5 (CTAF) 0 236.6</b> | GND CON<br><b>121.7</b> | CLNC DEL<br><b>121.85</b> | UNICOM<br><b>122.95</b> |
|----------------------|--------------------------------------|---|-------------------------|---------------------------|-------------------------|

## RADAR REQUIRED



NE-1. 22 OCT 2009 to 19 NOV 2009



| CATEGORY      | A                   | B                   | C                   | D |
|---------------|---------------------|---------------------|---------------------|---|
| LPV DA        | 328-1½ 200 (200-½)  |                     |                     |   |
| LNAV/ VNAV DA | 793-1¾ 665 (700-1¾) |                     |                     |   |
| LNAV MDA      | 740-½ 612 (700-½)   | 740-1¼ 612 (700-1¼) | 740-1½ 612 (700-1½) |   |
| CIRCLING      | 740-1 607 (700-1)   | 780-1¾ 647 (700-1¾) | 800-2 667 (700-2)   |   |

MIRL Rwy 5-23 **L**  
HIRL Rwy 11-29 **L**  
REIL Rwy 5 and 23

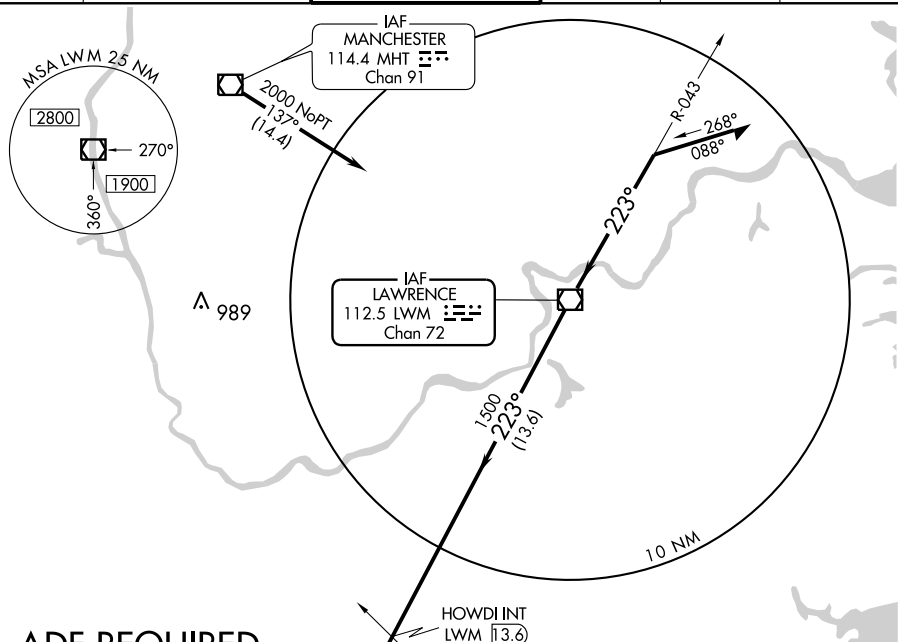
|   |                        |   |
|---|------------------------|---|
| VOR/DME LWM<br><b>112.5</b><br>Chan <b>72</b> | APP CRS<br><b>223°</b> | Rwy Idg <b>5106</b><br>TDZE <b>129</b><br>Apt Elev <b>133</b> |
|---|------------------------|---|

VOR RWY 23  
BEDFORD/LAURENCE G. HANSCOM FIELD (BED)

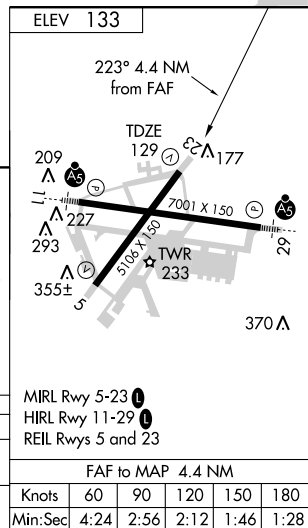
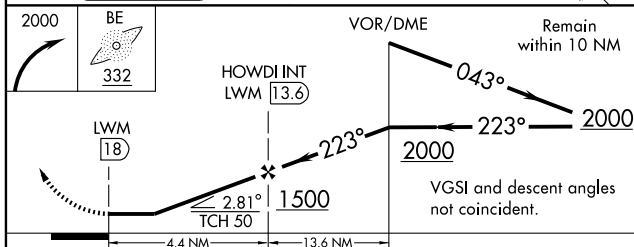
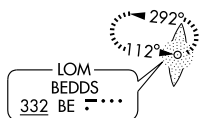
VOR RWY 23

**MISSED APPROACH:** Climbing right turn to 2000 direct BE LOM and hold.

|       |                |                      |         |          |        |
|-------|----------------|----------------------|---------|----------|--------|
| ATIS  | BOSTON APP CON | HANSCOM TOWER★       | GND CON | CLNC DEL | UNICOM |
| 124.6 | 124.4 279.6    | 118.5 (CTAF) 0 236.6 | 121.7   | 121.85   | 122.95 |



## ADF REQUIRED



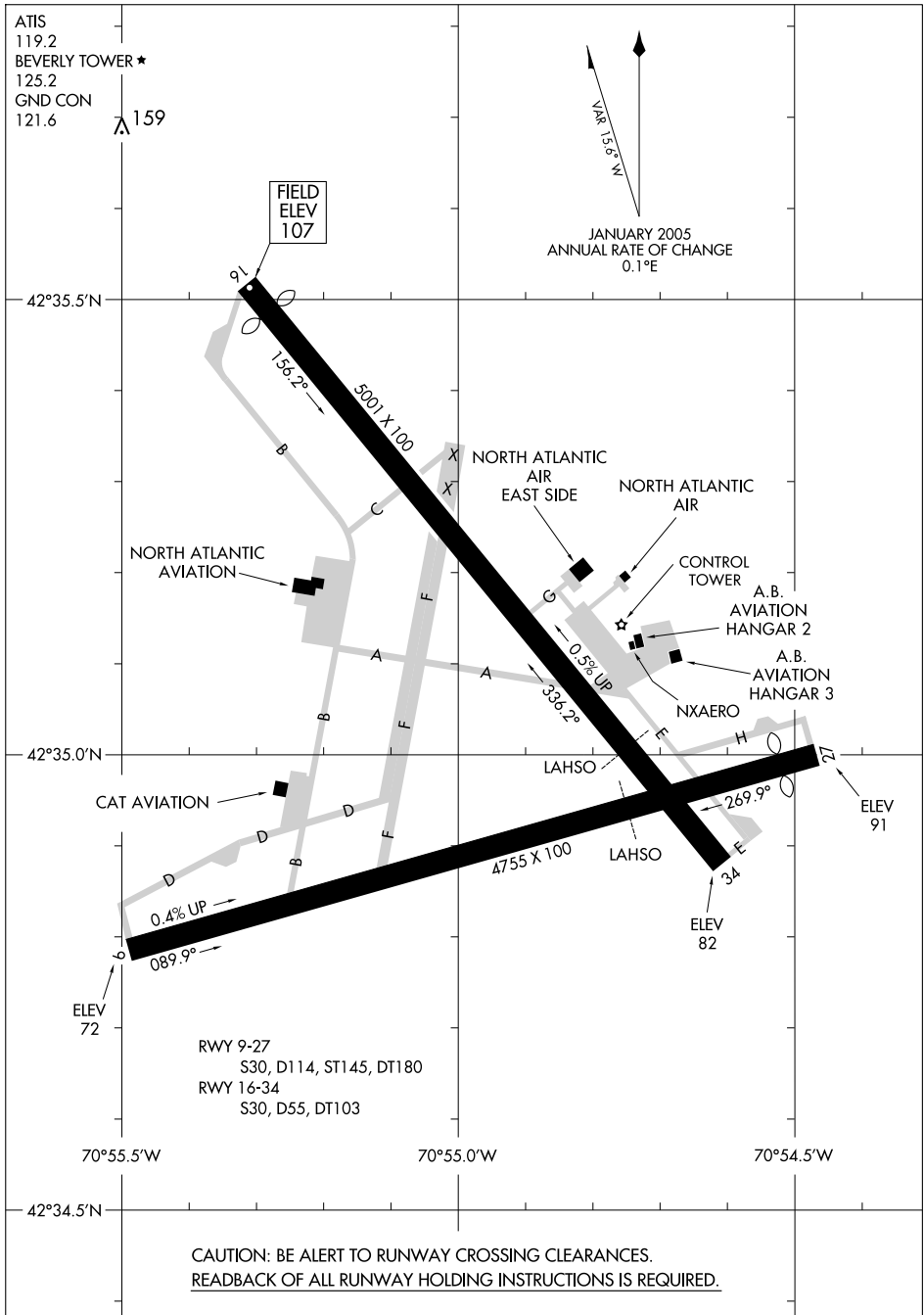
NE-1. 22 OCT 2009 to 19 NOV 2009

| CATEGORY | A                    | B                    | C                      | D                      |
|----------|----------------------|----------------------|------------------------|------------------------|
| S-23     | 680-1                | 551 (600-1)          | 680-1½<br>551 (600-1½) | 680-1¾<br>551 (600-1¾) |
| CIRCLING | 700-1<br>567 (600-1) | 720-1<br>587 (600-1) | 720-1½<br>587 (600-1½) | 780-2<br>647 (700-2)   |

# AIRPORT DIAGRAM

AL-5039 (FAA)

BEVERLY MUNI (BVY)  
BEVERLY, MASSACHUSETTS





# BEVERLY SIX DEPARTURE

AL-5039 (FAA)

BEVERLY MUNI (BVV)  
BEVERLY, MASSACHUSETTS

ATIS 119.2  
GND CON  
121.6  
BEVERLY TOWER \*  
125.2 (CTAF)  
BOSTON DEP CON  
124.4 279.6

CONCORD  
112.9 CON  
Chan 76  
N43°13.19'-W71°34.53'  
L-32

KENNEBUNK  
117.1 ENE  
Chan 118  
N43°25.54'-W70°36.81'  
L-32, H-11-12

PEASE  
116.5 PSM  
Chan 112  
N43°05.07'-W70°49.92'  
L-32-33, H-11-12

CHESTER  
115.1 CTR  
Chan 98  
N42°17.48'-W72°56.97'  
L-33-34,  
H-10-11-12

MANCHESTER  
114.4 MHT  
Chan 91  
N42°52.11'-W71°22.17'  
L-32-33

GLYDE  
N42°16.06'  
W71°48.71'  
L-33-34

BRADLEY  
109.0 BDL  
Chan 27  
N41°56.46'-W72°41.31'  
L-33-34, H-10-11-12

FRILL  
N42°13.79'  
W69°49.48'  
L-33, H-11-12

DRUNK  
N42°04.90'  
W70°39.38'  
L-33

BARNES  
113.0 BAF  
Chan 77  
N42°09.72'-W72°42.97'  
L-33-34, H-10-11-12

NELIE  
N41°55.68'  
W72°42.37'  
L-33-34,  
H-10-11-12

BOSOX  
N42°12.11'  
W71°37.66'  
L-33-34

BURDY  
N41°57.32'  
W70°57.12'  
L-33  
H-10-11-12

ARCER  
N41°46.59'  
W70°48.62'  
L-33

PROVIDENCE  
115.6 PVD  
Chan 103  
N41°43.46'-W71°25.78'  
L-33-34, H-10-11-12

LUCOS  
N41°38.29'  
W70°46.09'  
L-33, H-10-11-12

NANTUCKET  
116.2 ACK  
Chan 109  
N41°16.91'-W70°01.60'  
L-33, H-10-12

MARTHAS VINEYARD  
114.5 MVY  
Chan 92  
N41°23.77'-W70°36.76'  
L-33, H-10-12

SANDY POINT  
117.8 SEY  
Chan 125  
N41°10.05'-W71°34.57'  
L-33, H-10-12

NOTE: Chart not to scale.

## DEPARTURE ROUTE DESCRIPTION

All aircraft expect radar vectors to appropriate depicted NAVAID/fix. Maintain 2000'. Expect further clearance to filed altitude/flight level ten minutes after departure.

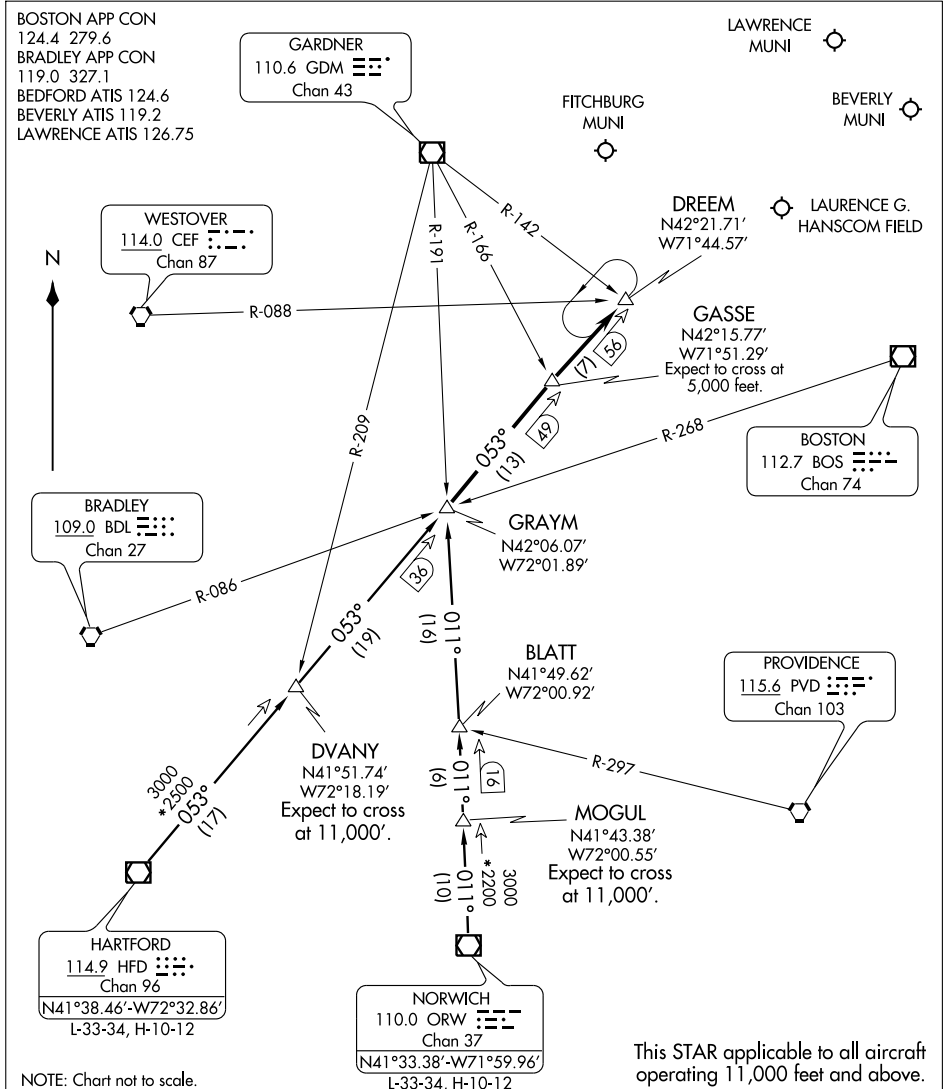
TAKE-OFF ALL RUNWAYS: Heading as assigned by ATC for vectors to assigned NAVAID/fix.

NE-1, 22 OCT 2009 to 19 NOV 2009

## GRAYM TWO ARRIVAL

ST-626 (FAA)

BEDFORD, MASSACHUSETTS



NE-1, 22 OCT 2009 to 19 NOV 2009

**HARTFORD TRANSITION (HFD.GRAYM2):** From over HFD VOR/DME via HFD R-053 to GRAYM INT. Thence. . .

**NORWICH TRANSITION (ORW.GRAYM2):** From over ORW VOR/DME via ORW R-011 to GRAYM INT. Thence. . .

. . . From over GRAYM INT via HFD VOR/DME R-053 to DROOM INT, then direct destination airport. Expect radar vectors to final approach course.

|   |                        |   |             |
|---|------------------------|---|-------------|
| LOC/DME I-BVY<br><b>110.5</b><br>Chan <b>42</b> | APP CRS<br><b>157°</b> | Rwy Idg<br>TDZE <b>107</b><br>Apt Elev <b>107</b> | <b>4762</b> |
|---|------------------------|---|-------------|

# LOC RWY 16

BEVERLY MUNI (BVY)

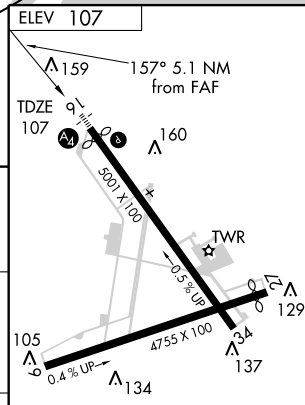
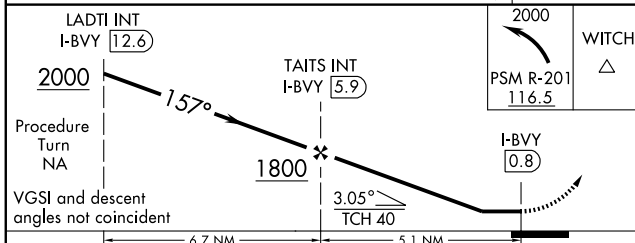
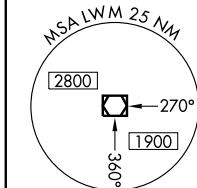
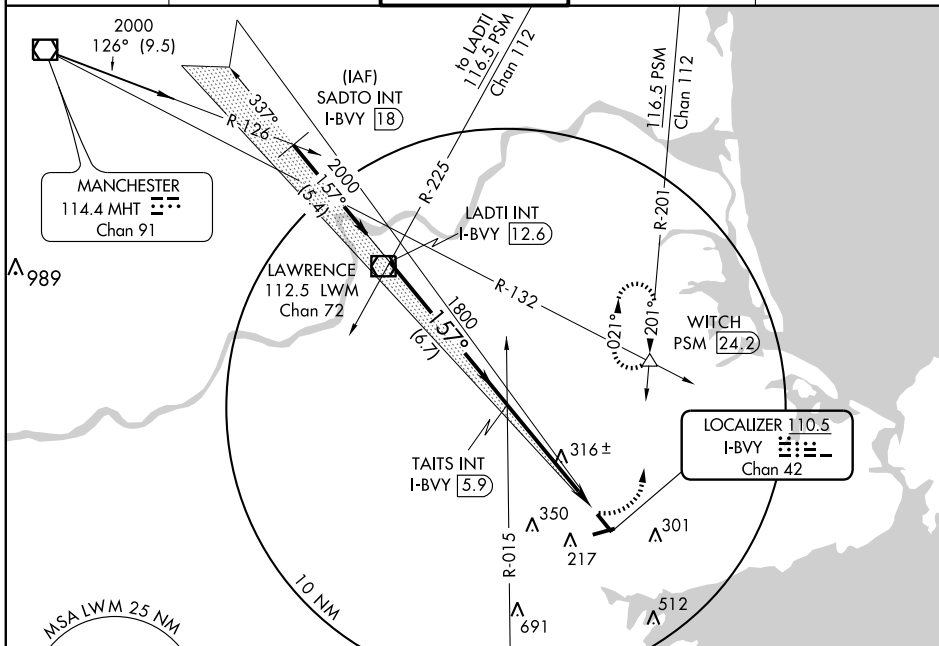
**▼**  
**▲** Inoperative table does not apply.

MALSF



MISSED APPROACH: Climbing left turn to 2000  
via PSM R-201 to WITCH Int/24.2 DME and hold.

|                      |                                      |   |                         |                         |
|----------------------|--------------------------------------|---|-------------------------|-------------------------|
| ATIS<br><b>119.2</b> | BOSTON APP CON<br><b>124.4 279.6</b> | BEVERLY TOWER ★<br><b>125.2</b> (CTAF) <b>0</b> | GND CON<br><b>121.6</b> | UNICOM<br><b>122.95</b> |
|----------------------|--------------------------------------|---|-------------------------|-------------------------|



| CATEGORY | A                 | B | C                      | D                      |
|----------|-------------------|---|------------------------|------------------------|
| S-16     | 580-1 473 (500-1) |   | 580-1½<br>473 (500-1½) | 580-1½<br>473 (500-1½) |
| CIRCLING | 620-1 513 (600-1) |   | 620-1½<br>513 (600-1½) | 700-2<br>593 (600-2)   |

|                      |                                  |
|----------------------|----------------------------------|
| REIL Rwy 34 <b>0</b> | MIRL Rwy 16-34 and 9-27 <b>0</b> |
| FAF to MAP 5.1 NM    |                                  |
| Knots                | 60 90 120 150 180                |
| Min:Sec              | 5:06 3:24 2:33 2:02 1:42         |

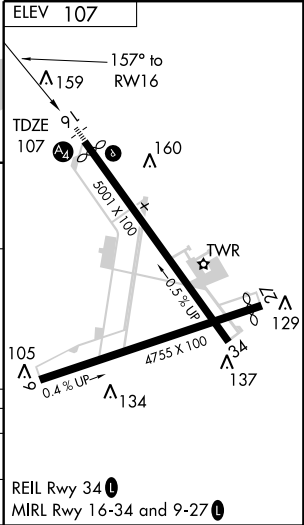
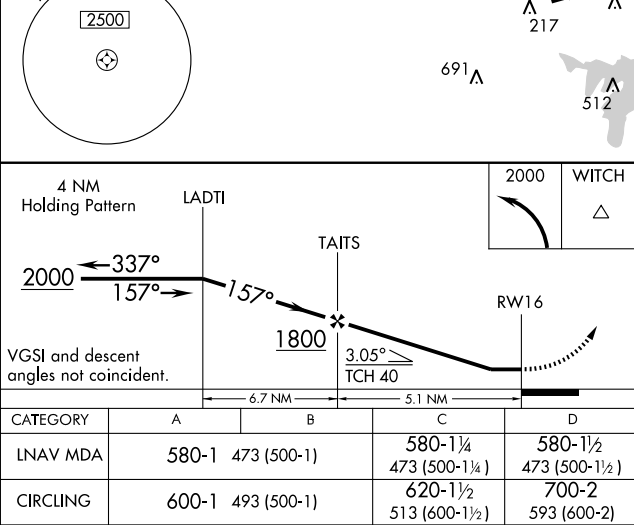
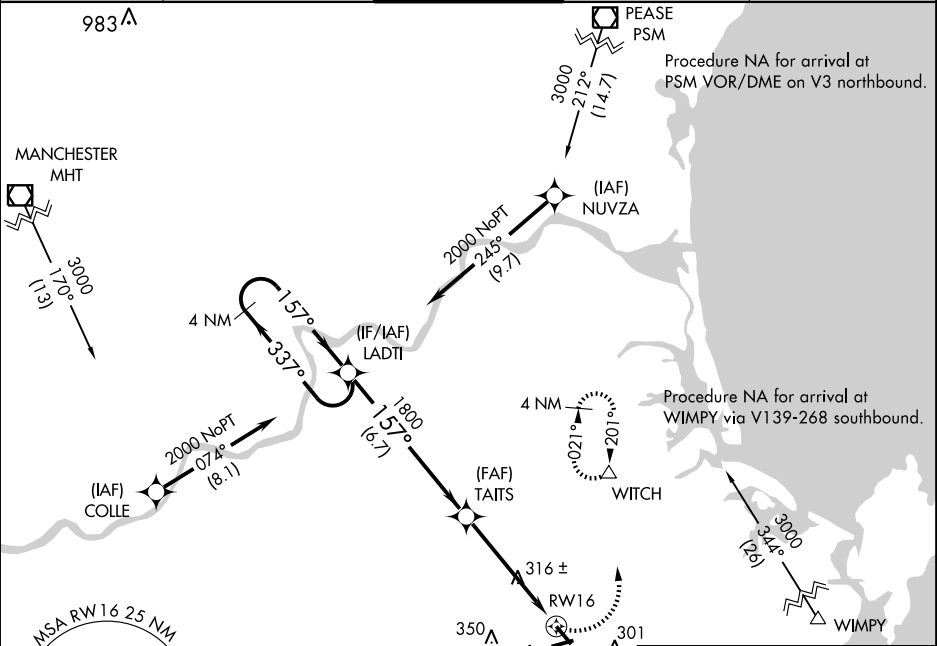
|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 4762 |
| 157°    | TDZE     | 107  |
|         | Apt Elev | 107  |

# RNAV (GPS) RWY 16

BEVERLY MUNI (BVY)

|   |           |   |
|---|-----------|---|
| <b>T</b> DME/DME RNP-0.3 NA.<br>Inoperative table does not apply. | MALSF<br> | MISSED APPROACH: Climbing left turn to 2000<br>direct WITCH and hold. |
|---|-----------|---|

|               |                               |                                |                  |                  |
|---------------|-------------------------------|--------------------------------|------------------|------------------|
| ATIS<br>119.2 | BOSTON APP CON<br>124.4 279.6 | BEVERLY TOWER★<br>125.2 (CTAF) | GND CON<br>121.6 | UNICOM<br>122.95 |
|---------------|-------------------------------|--------------------------------|------------------|------------------|

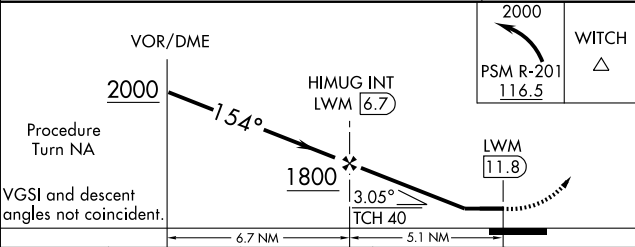
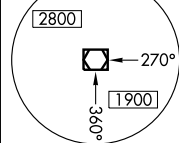
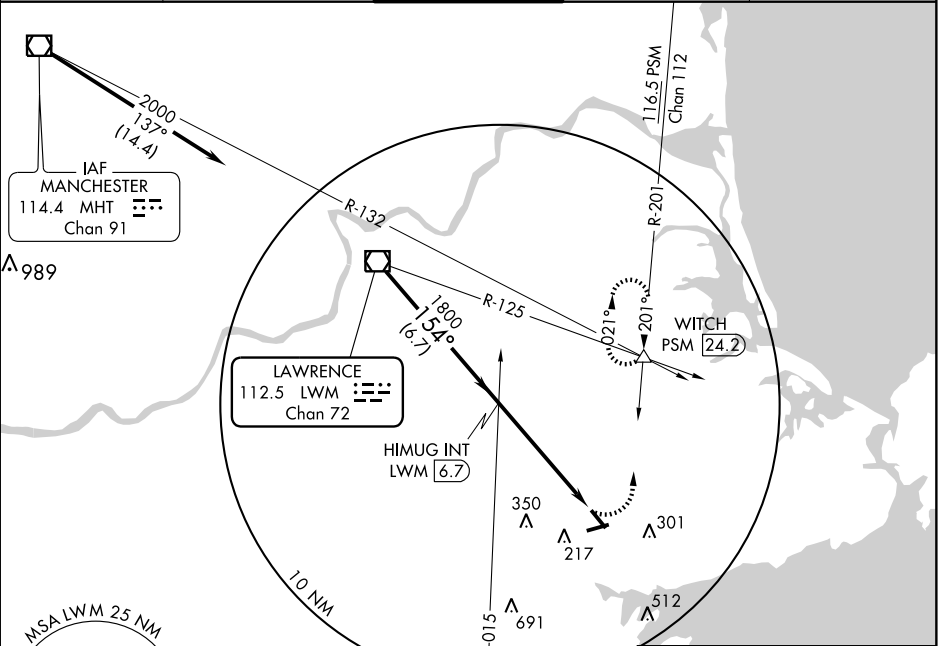


VOR RWY 16  
BEVERLY MUNI (BVY)

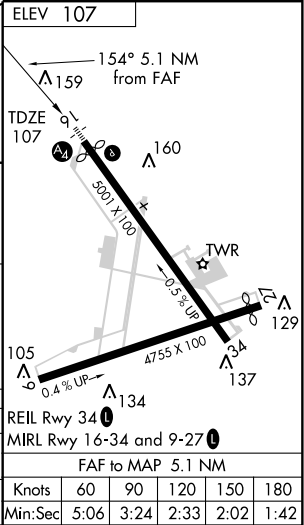
|             |         |          |      |
|-------------|---------|----------|------|
| VOR/DME LWM | APP CRS | Rwy Idg  | 4762 |
| 112.5       | 154°    | TDZE     | 107  |
| Chan 72     |         | Apt Elev | 107  |

|  |             |   |
|--|-------------|---|
| <b>T</b> Inoperative table does not apply. | MALSF<br>A2 | MISSED APPROACH: Climbing left turn to 2000 via PSM R-201 to WITCH Int/24.2 DME and hold. |
|--|-------------|---|

|               |                               |                                   |                  |                  |
|---------------|-------------------------------|-----------------------------------|------------------|------------------|
| ATIS<br>119.2 | BOSTON APP CON<br>124.4 279.6 | BEVERLY TOWER ★<br>125.2 (CTAF) 0 | GND CON<br>121.6 | UNICOM<br>122.95 |
|---------------|-------------------------------|-----------------------------------|------------------|------------------|



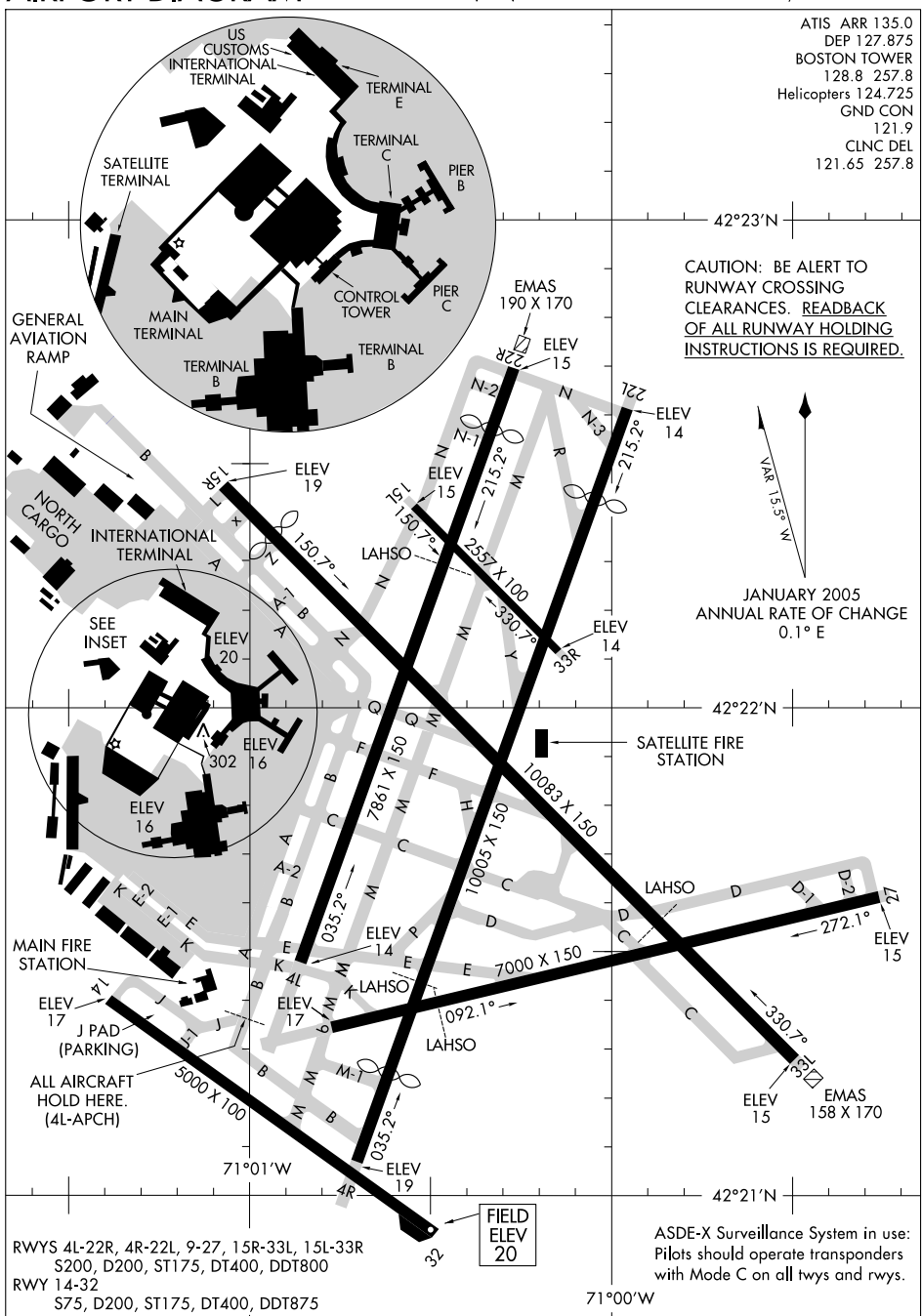
| CATEGORY | A                 | B | C                     | D                 |
|----------|-------------------|---|-----------------------|-------------------|
| S-16     | 720-1 613 (700-1) |   | 720-1 613 (700-1 3/4) | 720-2 613 (700-2) |
| CIRCLING | 720-1 613 (700-1) |   | 720-1 613 (700-1 3/4) | 720-2 633 (700-2) |



# AIRPORT DIAGRAM

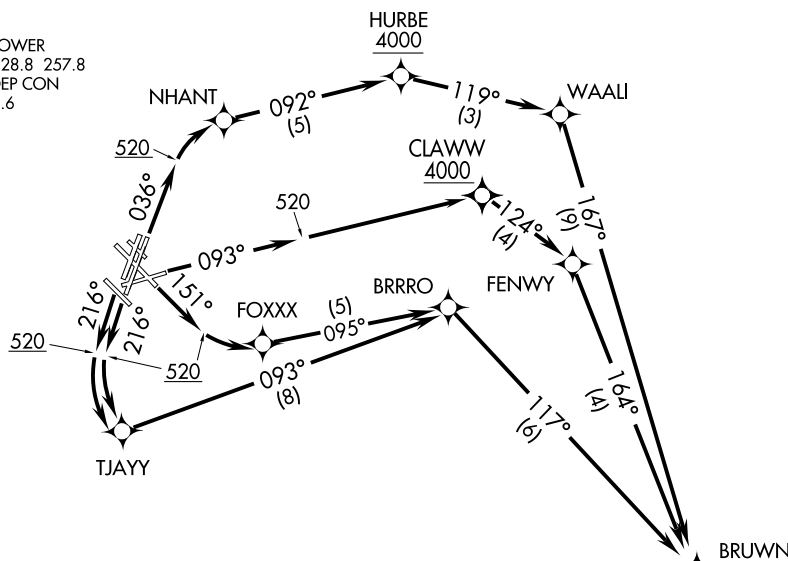
AL-58 (FAA)

BOSTON, MASSACHUSETTS



VE-1 22 OCT 2009 to 19 NOV 2009

ATIS DEP 127.875  
CLNC DEL  
121.65 257.8  
GND CON  
121.9  
BOSTON TOWER  
132.225 128.8 257.8  
BOSTON DEP CON  
133.0 343.6



#### TAKE-OFF MINIMUMS:

RWY 4L, 14, 15L, 27,

32, 33L, 33R: NA - Air Traffic

RWY 4R, 15R: Standard. ATC climb of 400' per NM to 520.

RWY 9, 300-1 ¼ or Standard with minimum climb of 272' per NM to 300.

ATC climb of 500' per NM to 4000.

RWY 22L, 300-1 or Standard when tower reports no tall vessels in the departure area.

ATC climb of 400' per NM to 520.

RWY 22R, 300-1 ¾ or Standard with minimum climb of 320' per NM to 400.

ATC climb of 400' per NM to 520.

NOTE: DME/DME/IRU or GPS Required.

NOTE: Radar Required.

NOTE: RNAV 1.

NOTE: Turbojet aircraft only.

NOTE: For non-GPS equipped aircraft, BOS and LWM DME must be operational.

NOTE: Departure HDG/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

NE-1, 22 OCT 2009 to 19 NOV 2009



## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 4R: Climb heading 036° to 520 MSL, then climb to assigned altitude direct NHANT, and via track 092° to HURBE, cross HURBE at or above 4000, thence...

TAKE-OFF RUNWAY 9: Climb heading 093° to 520 MSL, then climb to assigned altitude direct CLAWW, cross CLAWW at or above 4000, thence....

TAKE-OFF RUNWAY 15R: Climb heading 151° to 520 MSL, then climb to assigned altitude direct FOXXX, thence...

TAKE-OFF RUNWAYS 22L/22R: Climb heading 216° to 520 MSL, then climb to assigned altitude direct TJAYY, thence...

....via depicted route to BRUWN. Maintain 5000' or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

### NANTUCKET TRANSITION (BRUWN1.ACK):

#### TAKE-OFF OBSTACLES:

RWY 4R: Light on pole and multiple trees beginning 1807' from DER, 403' left of centerline, up to 33' AGL/79' MSL. Ship 570' from DER, on centerline, 50' AGL/50' MSL. Crane 2001' from DER, 434' right of centerline, 101' AGL/114' MSL. Mobile crane 2009' from DER, 206' right of centerline, 114' AGL/134' MSL.

RWY 9: Antenna on standpipe and tank beginning 5878' from DER, 1429' left of centerline, up to 138' AGL/217' MSL. Ship 763' from DER, on centerline, 65' AGL/65' MSL.

RWY 15R: Sign 45' from DER, 267' right of centerline, 6' AGL, 16' MSL.

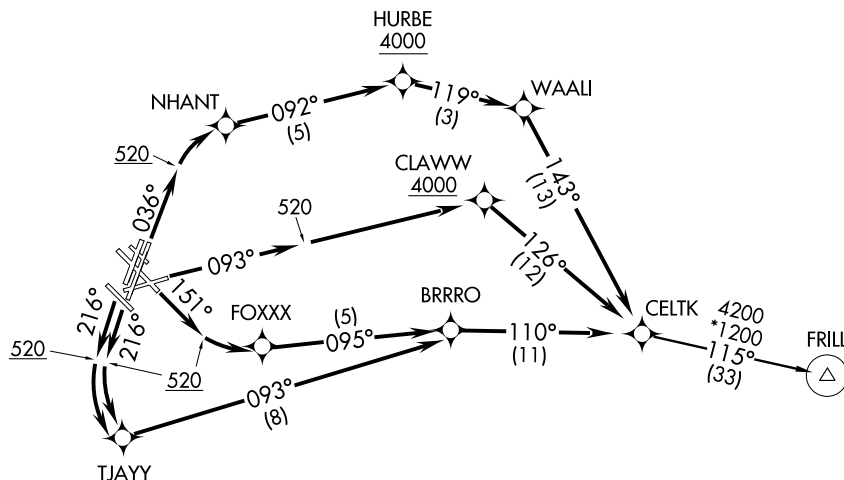
RWY 22L: RIG 2,441' from DER, 35' left of centerline, 176' AGL/176' MSL. Obstruction light pole 3586' from DER, 926' left of centerline, 108' AGL/128' MSL.

Mobile crane 3676' from DER, 440' right of centerline, 122' AGL/145' MSL.

RWY 22R: RIG 4586' from DER, 1535' left of centerline, 176' AGL/176' MSL. RIG 4064' from DER, 8' right of centerline, 176' AGL/176' MSL. Stacks 1.3 NM from DER, 1598' right of centerline, 255' AGL/278' MSL.



ATIS DEP 127.875  
 CLNC DEL  
 121.65 257.8  
 GND CON  
 121.9  
 BOSTON TOWER  
 132.225 128.8 257.8  
 BOSTON DEP CON  
 133.0 343.6



NOTE: DME/DME/IRU or GPS Required.

NOTE: Radar Required.

NOTE: RNAV 1.

NOTE: Turbojet aircraft only.

NOTE: Rwy 4R departure, For non-GPS equipped aircraft, BOS DME must be operational.

NOTE: Rwys 9, 15R, 22L, 22R, departure, For non-GPS equipped aircraft, BOS and LWM DME must be operational.

NOTE: Departure HDG/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.

#### TAKE-OFF MINIMUMS:

Rwys 4L, 14, 15L, 27, 32,

33L, 33R: NA - Air Traffic.

Rwy 4R, 15R: Standard.

ATC climb of 400' per NM to 520.

Rwy 9: 300-1¼ or Standard with minimum climb of 272' per NM to 300.

ATC climb of 500' per NM to 4000.

Rwy 22L: 300-1 or Standard when tower reports no tall vessels in the departure area.

ATC climb of 400' per NM to 520.

Rwy 22R: 300-1¾ or Standard with minimum climb of 320' per NM to 400.

ATC climb of 400' per NM to 520.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.



## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 4R: Climb heading 036° to 520 MSL, then climb to assigned altitude direct NHANT, and via track 092° to HURBE, cross HURBE at or above 4000, thence...

TAKE-OFF RUNWAY 9: Climb heading 093° to 520 MSL, then climb to assigned altitude direct CLAWW, cross CLAWW at or above 4000, thence....

TAKE-OFF RUNWAY 15R: Climb heading 151° to 520 MSL, then climb to assigned altitude direct FOXXX, thence...

TAKE-OFF RUNWAYS 22L/22R: Climb heading 216° to 520 MSL, then climb to assigned altitude direct TJAYY, thence...

....via depicted route to CELTK. Maintain 5000' or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

FRILL TRANSITION (CELTK1.FRILL):TAKE-OFF OBSTACLES:

RWY 4R: Light on pole and multiple trees beginning 1807' from DER, 403' left of centerline, up to 33' AGL/79' MSL. Ship 579' from DER, on centerline, 50' AGL/50' MSL. Crane 2001' from DER, 434' right of centerline, 101' AGL/114' MSL. Mobile crane 2009' from DER, 206' right of centerline, 114' AGL/134 MSL.

RWY 9: Antenna on standpipe and tank beginning 5878' from DER, 1429' left of centerline, up to 138' AGL/217' MSL. Ship 763' from DER, on centerline, 65' AGL/65' MSL.

RWY 15R: Sign 45' from DER, 267' right of centerline, 6' AGL, 16' MSL.

RWY 22L: RIG 2441' from DER, 35' left of centerline, 176' AGL/176' MSL. Obstruction light pole 3586' from DER, 926' left of centerline, 108' AGL/128' MSL. Mobile crane 3676' from DER, 440' right of centerline, 122' AGL/145' MSL.

RWY 22R: RIG, 4586' from DER, 1535' left of centerline, 176' AGL/176' MSL. RIG 4064' from DER, 8' right of centerline, 176' AGL/176' MSL. Stacks 1.3 NM from DER, 1598' right of centerline, 255' AGL/278' MSL.

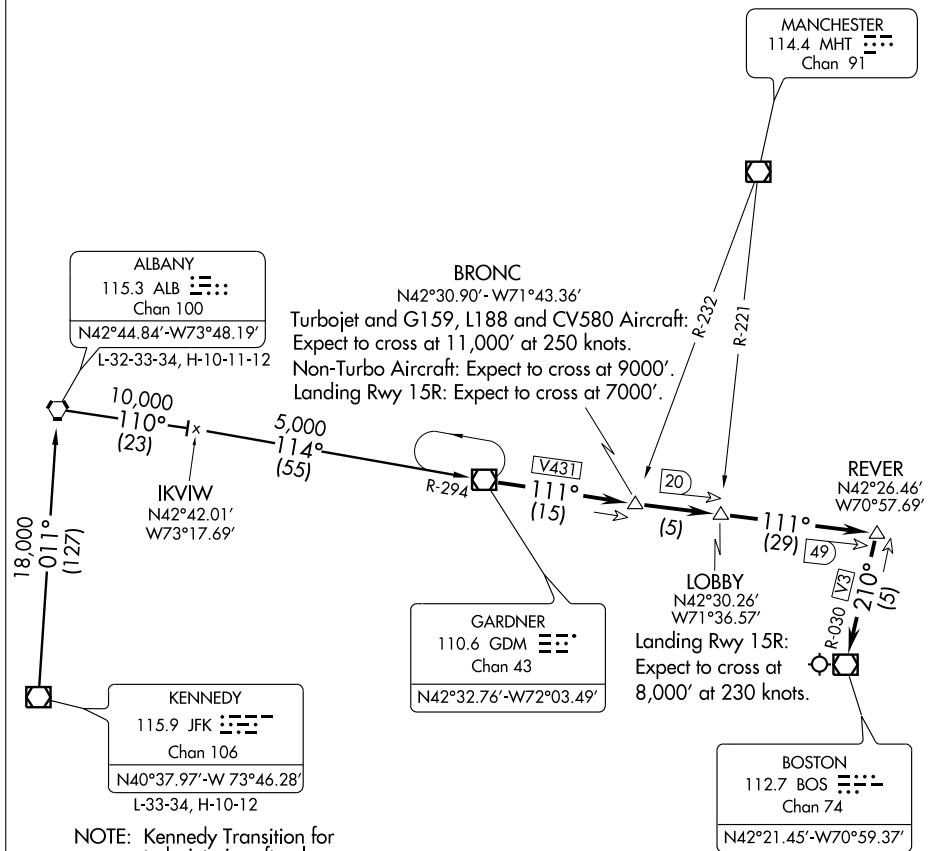
**GARDNER THREE ARRIVAL** ST-58 (FAA)

BOSTON, MASSACHUSETTS

BOSTON APP CON

120.6 263.1

ATIS ARR 135.0



NOTE: Kennedy Transition for turbojet aircraft only.

NOTE: Chart not to scale.

**ALBANY TRANSITION (ALB.GDM3):** From over ALB VORTAC via ALB R-110 and GDM R-294 to GDM VOR/DME. Thence....

**KENNEDY TRANSITION (JFK.GDM3):** From over JFK VOR/DME via JFK R-011 to ALB VORTAC, then via ALB R-110 and GDM R-294 to GDM VOR/DME. Thence....

....From over GDM VOR/DME via GDM R-111 (V431) to BOS R-030 (V3) to BOS VOR/DME. Expect radar vectors to final approach course.

NOTE: DME/DME/IRU or GPS Required.

NOTE: Radar Required.

NOTE: RNAV 1.

NOTE: Turbojet aircraft only.

NOTE: Departure HDG/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.

ATIS DEP 127.875

CLNC DEL

121.65 257.8

GND CON

121.9

BOSTON TOWER

132.225 128.8 257.8

BOSTON DEP CON

133.0 343.6

MANCHESTER  
MHT

KERMT

### TAKE-OFF MINIMUMS

Rwys 4L, 14, 15L, 27, 32, 33L, 33R:

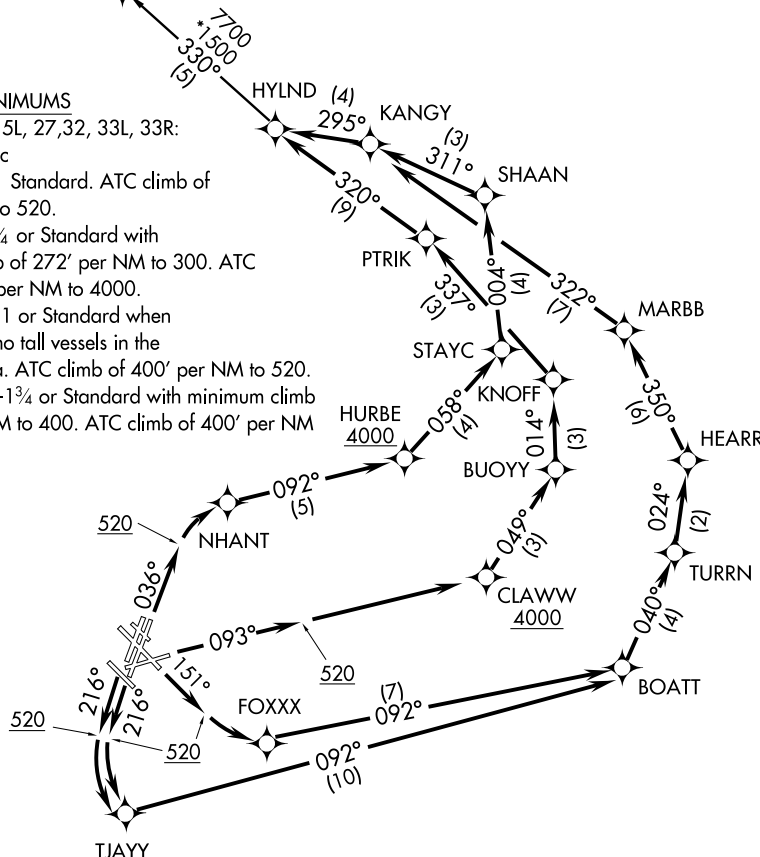
NA - Air Traffic

Rwys 4R, 15R: Standard. ATC climb of 400' per NM to 520.

Rwy 9, 300-1¼ or Standard with minimum climb of 272' per NM to 300. ATC climb of 500' per NM to 4000.

Rwy 22L, 300-1 or Standard when tower reports no tall vessels in the departure area. ATC climb of 400' per NM to 520.

Rwy 22R, 300-1¾ or Standard with minimum climb of 320' per NM to 400. ATC climb of 400' per NM to 520.



(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.



## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 4R: Climb heading 036° to 520 MSL, then climb to assigned altitude direct NHANT, and via track 092° to HURBE, cross HURBE at or above 4000, thence . . . .

TAKE-OFF RUNWAY 9: Climb heading 093° to 520 MSL, then climb to assigned altitude direct CLAWW, cross CLAWW at or above 4000 thence . . . .

TAKE-OFF RUNWAY 15R: Climb heading 151° to 520 MSL, then climb to assigned altitude direct FOXXX, thence . . . .

TAKE-OFF RUNWAY 22L/22R: Climb heading 216° to 520 MSL, then climb to assigned altitude direct TJAYY, thence...

. . . . via depicted route to HYLND. Maintain 5000' or lower assigned altitude.  
Expect clearance to filed altitude/flight level ten (10) minutes after departure.

MANCHESTER TRANSITION (HYLND1.MHT):TAKE-OFF OBSTACLES NOTES

Rwy 4R: Light on pole and multiple trees beginning 1807' from DER, 403' left of centerline, up to 33' AGL/79' MSL. Ship 570' from DER, on centerline, 50' AGL/50' MSL. Crane 2001' from DER, 434' right of centerline, 101' AGL/114' MSL. Mobile crane 2009' from DER, 206' right of centerline, 114' AGL/134' MSL.

Rwy 9: Antenna on standpipe and tank beginning 5878' from DER, 1429' left of centerline, up to 138' AGL/217' MSL. Ship 763' from DER, on centerline, 65' AGL/65' MSL.

Rwy 15R: Sign 45' from DER, 267' right of centerline, 6' AGL, 16' MSL.

Rwy 22L: RIG 2441' from DER, 35' left of centerline, 176' AGL/176' AGL/176' MSL. Obstruction light pole 3586' from DER, 926' left of centerline, 108' AGL/128' MSL. Mobile crane 3676' from DER, 440' right of centerline, 122' AGL/145' MSL.

Rwy 22R: RIG 4586' from DER, 1535' left of centerline, 176' AGL/176' MSL. RIG 4064' from DER, 8' right of centerline, 176' AGL/176' MSL. Stacks 1.3 NM from DER, 1598' right of centerline, 255' AGL/278' MSL.

LOC/DME I-BOS

110.3

Chan 40

APP CRS

036°

Rwy ldg TDZE

8851

18

Apt Elev

19

ILS or LOC RWY 4R

BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

⚠ CATs C and D circling not authorized west of Rwy 4L and 15R.

\*\* Inoperative table does not apply.

ALSF-2

MISSED APPROACH: Climb to 3000 via BOS R-030 to WAXEN INT/BOS 1.4 DME and hold.

ATIS

ARR 135.0

DEF 127.875

BOSTON APP CON

120.6

263.1

BOSTON TOWER

Rwys 4R-22L, 9-27

132.225 257.8

Rwys 4L-22R, 14-32, 15R-33L, 15L-33R

128.8 257.8

GND CON

121.9

CLNC DEL

121.65 257.8

MISSED APCH FIX

114.4 MHT Chan 91

WAXEN BOS 14

112.7 BOS Chan 74

R-030

210°

030°

R-145

RADAR or DME REQUIRED

LOCALIZER 110.3 I-BOS Chan 40

BOSTON 112.7 BOS Chan 74

LOM MILTT 375 BO I-BOS 6.9 RADAR

LOM STGE 397 OW

NABBO I-BOS 11.9 RADAR

(IAF) WINNI I-BOS 16.9 RADAR

3000 036°

1800

990

10 NM

216°

MSA BO 25 NM

2500

2000

180°

360°

WINNI I-BOS 16.9 RADAR

NABBO I-BOS 11.9 RADAR

MILTT LOM I-BOS 6.9 RADAR

3000

BOS R-030 112.7

WAXEN

4000

036°

3000

1723

1800

MM

IM

I-BOS 1.8

Procedure Turn NA

GS 3.00°

TCH 51\*

\* Displ Thld

5 NM

5 NM

4.7 NM

0.2

0.2 NM

| CATEGORY | A                  | B           | C                      | D                    |
|----------|--------------------|-------------|------------------------|----------------------|
| S-ILS 4R | 218/18 200 (200-½) |             |                        |                      |
| S-LOC 4R | 440/24             | 422 (500-½) | 440/40                 | 422 (500-¾)          |
| CIRCLING | 640-1              | 621 (700-1) | 640-1¾<br>621 (700-1¾) | 640-2<br>621 (700-2) |

APPROACH MINIMA WHEN CONTROL TOWER REPORTS TALL VESSELS IN APPROACH AREA

|            |        |              |  |  |
|------------|--------|--------------|--|--|
| S-ILS 4R** | 359/60 | 341 (400-1¼) |  |  |
| S-LOC 4R** | 440/60 | 422 (500-1¼) |  |  |

ELEV 19

66°

221

222

2557 X 100

151

150

10083 X 150

10083 X 150

7861 X 150

45

10083 X 150

33

62 ±

3000 X 100

036° 5.1 NM from FAF

TDZE 18

TDZ/CL Rwys 4R, 15R and 33L

REIL Rwys 4L, 27 and 32

MIRL Rwy 15L-33R

HIRL Rwys 4L-22R, 4R-22L, 14-32, 15R-33L and 9-27

FAF to MAP 5.1 NM

| Knots   | 60   | 90   | 120  | 150  | 180  |
|---------|------|------|------|------|------|
| Min:Sec | 5:06 | 3:24 | 2:33 | 2:02 | 1:42 |

NE-1, 22 OCT 2009 to 19 NOV 2009

|                |             |          |              |
|----------------|-------------|----------|--------------|
| LOC/DME I-LIP  | APP CRS     | Rwy Idg  | <b>10083</b> |
| <u>110.7</u>   | <b>331°</b> | TDZE     | <b>16</b>    |
| Chan <b>44</b> |             | Apt Elev | <b>20</b>    |

ILS or LOC RWY 33L  
BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

**T**  
**A** Circling NA for CATs C and D W of Rwy 4L and 15R.  
DME or RADAR required.

MALSR

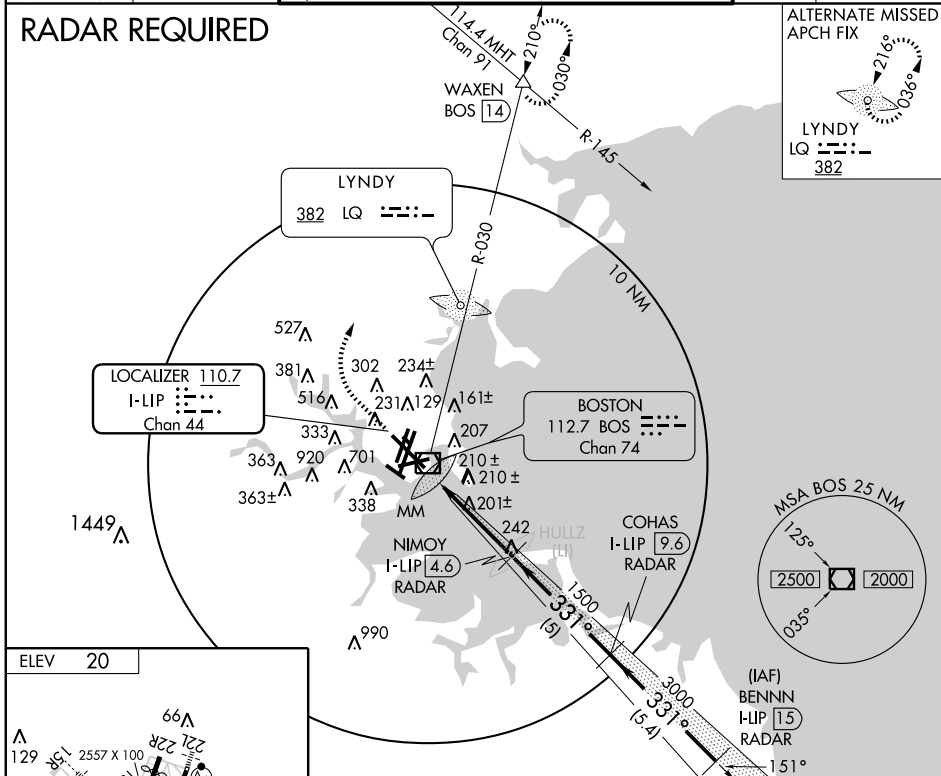
**MISSED APPROACH:** Climb to 1500 then climbing right turn to 3000 via BOS VOR/DME R-030 to WAXEN/BOS VOR/DME 14 DME and hold.

|      |         |                |       |                                      |               |         |              |
|------|---------|----------------|-------|--------------------------------------|---------------|---------|--------------|
| ATIS |         | BOSTON APP CON |       | BOSTON TOWER                         |               | GND CON | CLNC DEL     |
| ARR  | 135.0   |                |       | Rwys 4R-22L, 9-27                    | 132.225 257.8 |         |              |
| DEP  | 127.875 | 120.6          | 263.1 | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8 257.8   | 121.9   | 121.65 257.8 |

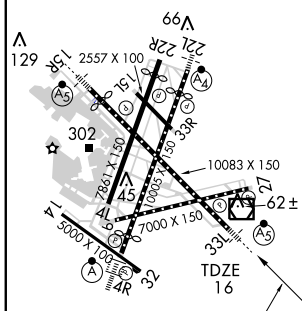
## RADAR REQUIRED

ALTERNATE MISSED  
APCH FIX

LYNDY  
LQ :--:--  
382

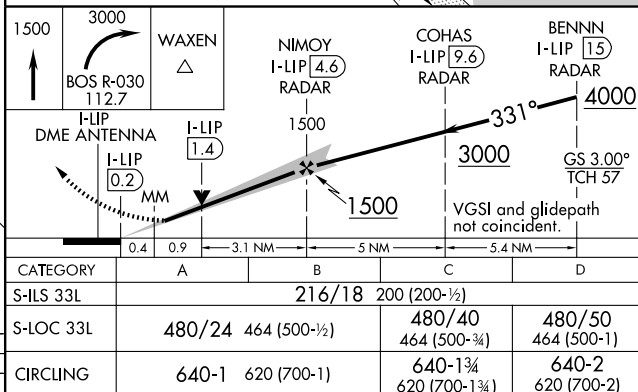


|      |    |
|------|----|
| ELEV | 20 |
|------|----|



TDZ/CL Rwy 4R, 15R and 33L  
REIL Rwy 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwy 4L-22R, 4R-22L,  
14-32, 15R-33L and 9-27

| FAF to MAP 4.4 NM |      |      |      |      |      |
|-------------------|------|------|------|------|------|
| Knots             | 60   | 90   | 120  | 150  | 180  |
| Min:Sec           | 4:24 | 2:56 | 2:12 | 1:46 | 1:28 |



|   |                        |   |
|---|------------------------|---|
| LOC/DME I-BOS<br><u>110.3</u><br>Chan <b>40</b> | APP CRS<br><b>036°</b> | Rwy Idg <b>8851</b><br>TDZE <b>18</b><br>Apt Elev <b>19</b> |
|---|------------------------|---|

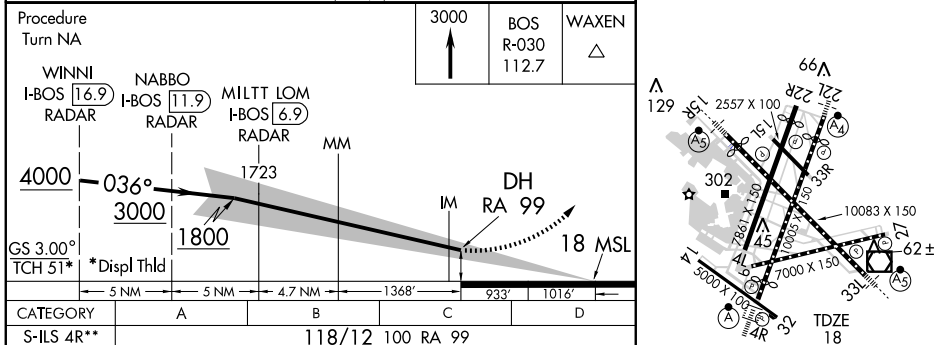
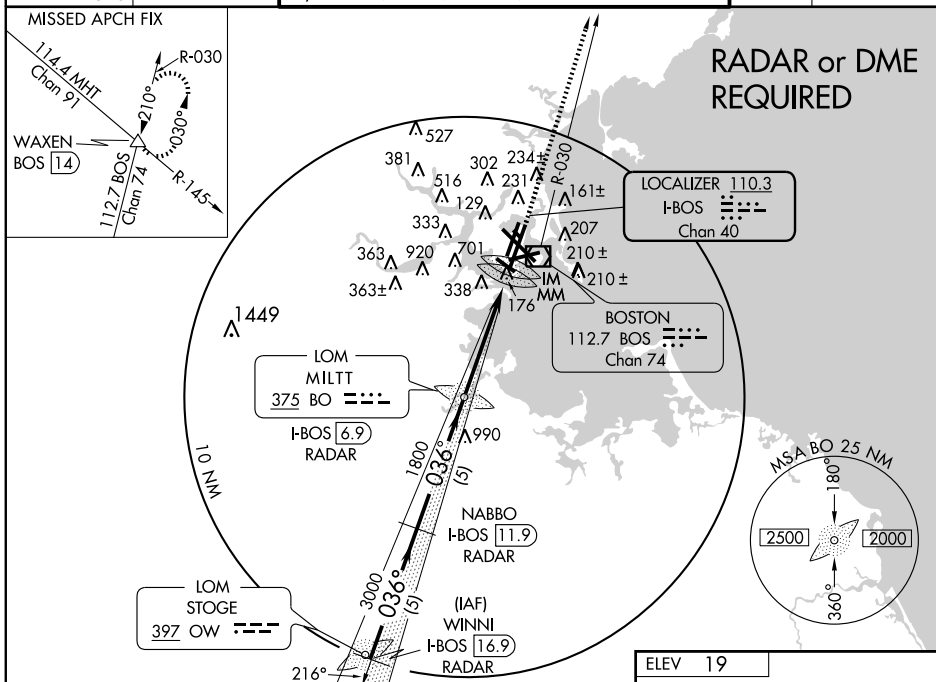
**ILS RWY 4R (CAT II)**  
BOSTON/ GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

**T** \*\* When control tower reports tall vessels in approach  
**A** area, procedure not authorized.

ALSF-2

MISSED APPROACH: Climb to 3000 via BOS R-030 to WAXEN INT/BOS 14 DME and hold.

|      |         |                |       |                                      |               |         |              |
|------|---------|----------------|-------|--------------------------------------|---------------|---------|--------------|
| ATIS |         | BOSTON APP CON |       | BOSTON TOWER                         |               | GND CON | CLNC DEL     |
| ARR  | 135.0   | 120.6          | 263.1 | Rwys 4R-22L, 9-27                    | 132.225 257.8 |         |              |
| DEP  | 127.875 |                |       | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8 257.8   | 121.9   | 121.65 257.8 |



CATEGORY II ILS - SPECIAL AIRCREW  
& AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwy 4R, 15R and 33L  
REIL Rwy 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwy 4L-22R, 4R-22L,  
14-32, 15R-33L and 9-27



⚠

\*\* When control tower reports tall vessels in approach area, procedure not authorized.

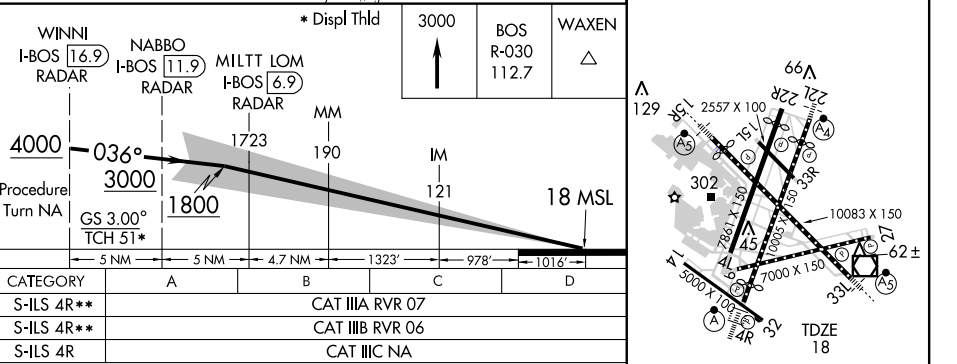
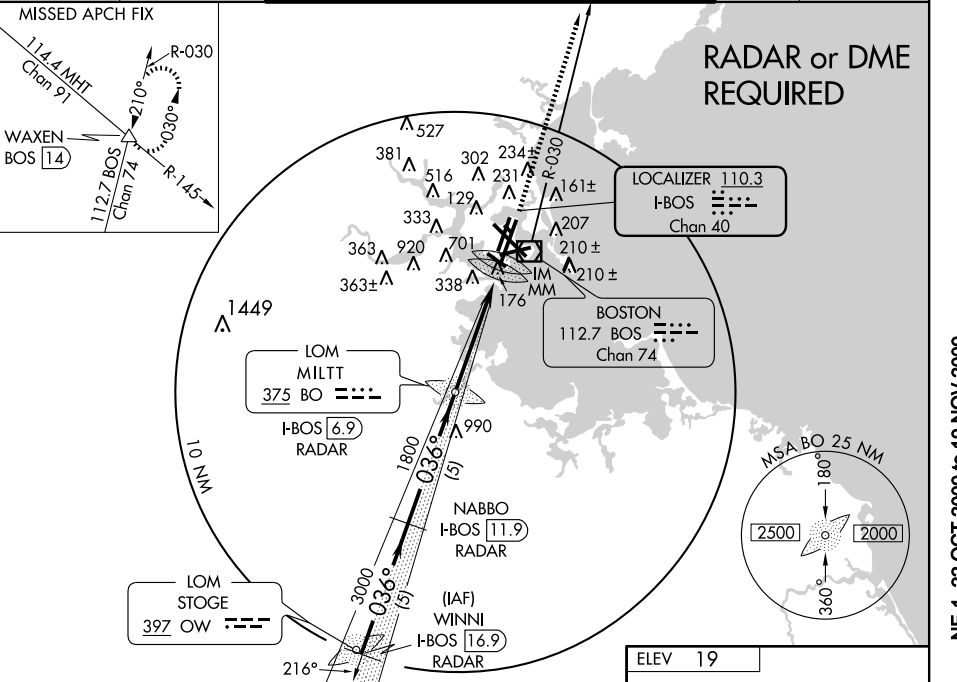
ALSF-2

ⓐ

ⓑ

MISSED APPROACH: Climb to 3000 via BOS R-030 to WAXEN INT/BOS 14 DME and hold.

|                                  |                               |   |                              |                  |                          |
|----------------------------------|-------------------------------|---|------------------------------|------------------|--------------------------|
| ATIS<br>ARR 135.0<br>DEP 127.875 | BOSTON APP CON<br>120.6 263.1 | BOSTON TOWER<br>Rwys 4R-22L, 9-27<br>Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 132.225 257.8<br>128.8 257.8 | GND CON<br>121.9 | CLNC DEL<br>121.65 257.8 |
|----------------------------------|-------------------------------|---|------------------------------|------------------|--------------------------|



CATEGORY III ILS - SPECIAL AIRCREW  
& AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwys 4R, 15R and 33L  
REIL Rwys 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwys 4L-22R, 4R-22L,  
14-32, 15R-33L and 9-27

NE-1, 22 OCT 2009 to 19 NOV 2009

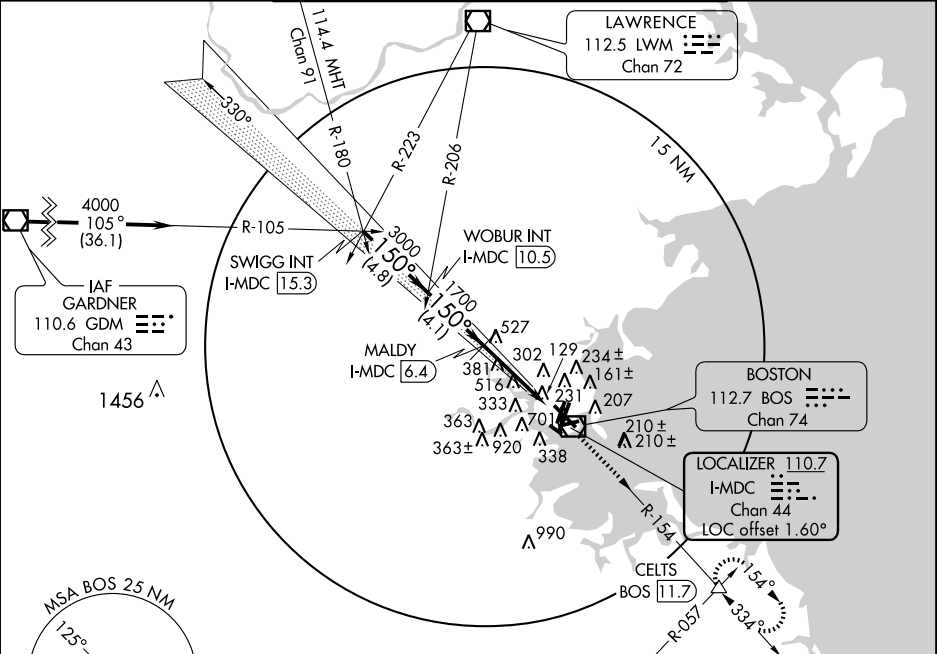
ILS RWY 15R

|                |             |                    |
|----------------|-------------|--------------------|
| LOC/DME I-MDC  | APP CRS     | Rwy Idg            |
| <b>110.7</b>   | <b>150°</b> | <b>9201</b>        |
| Chan <b>44</b> |             | TDZE <b>17</b>     |
|                |             | Apt Elev <b>19</b> |

BOSTON/ GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

|   |                    |   |
|---|--------------------|---|
| <b>⚠</b> CAT C and D circling not authorized west of Rwy 4L and 15R<br>For inoperative MALSR, increase S-LOC 15R CATs A and B visibility to RVR 5000. DME REQUIRED. | <b>MALSR</b><br>A5 | <b>MISSED APPROACH:</b> Climb to 3000 via BOS R-154 to CELTS Int/BOS 11.7 DME and hold. |
|---|--------------------|---|

|                    |                    |   |              |                     |
|--------------------|--------------------|---|--------------|---------------------|
| ATIS               | BOSTON APP CON     | BOSTON TOWER  | GND CON      | CLNC DEL            |
| ARR <b>135.0</b>   | <b>120.6 263.1</b> | Rwys 4R-22L, 9-27 <b>132.225 257.8</b>                  | <b>121.9</b> | <b>121.65 257.8</b> |
| DEP <b>127.875</b> |                    | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R <b>128.8 257.8</b> |              |                     |



|                      |                      |                     |                     |
|----------------------|----------------------|---------------------|---------------------|
| SWIGG INT I-MDC 15.3 | WOBUR INT I-MDC 10.5 | MALDY I-MDC 6.4     | CELTS I-MDC 1.4     |
| 4000                 | 3000                 | 1700                | 1500                |
| Procedure Turn NA    | GS 3.00° TCH 60      |                     |                     |
| 4.8 NM               | 4.1 NM               | 5 NM                |                     |
| CATEGORY             | A                    | B                   | C                   |
| S-ILS 15R            | 267/24               | 250 (300-½)         |                     |
| S-LOC 15R            | 600/24 583 (600-½)   | 600/50 583 (600-1)  | 600/60 583 (600-1¼) |
| CIRCLING             | 640-1 621 (700-1)    | 640-1¾ 621 (700-1¾) | 640-2 621 (700-2)   |

TDZ/CL Rwys 4R, 15R and 33L  
REIL Rwys 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwys 4L-22R, 4R-22L, 14-32, 15R-33L and 9-27

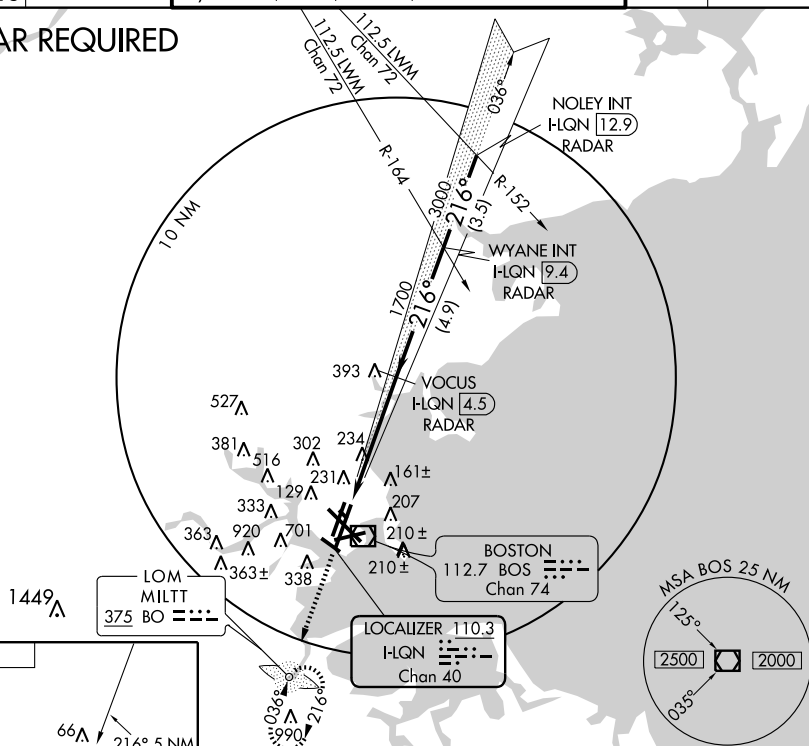
ILS RWY 22L  
BOSTON/ GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

ILS RWY 22L

MALSF

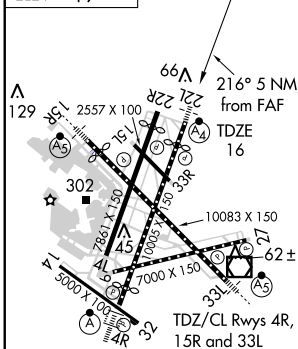
**MISSED APPROACH:** Climb to 3000  
direct MILTT LOM and hold.

# RADAR REQUIRED



NE-1. 22 OCT 2009 to 19 NOV 2009

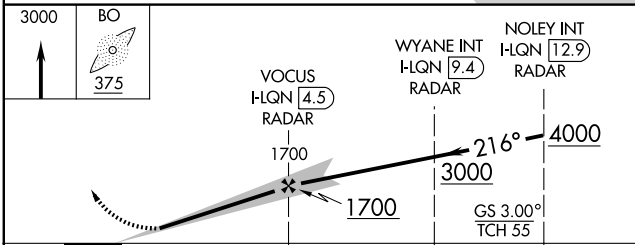
ELEV 19



REIL Rwy 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwy 4L-22R, 4R-22L,  
14-32, 15R-33L and 9-27

FAF to MAP 5 NM

|         |      |      |      |      |      |
|---------|------|------|------|------|------|
| Knots   | 60   | 90   | 120  | 150  | 180  |
| Min:Sec | 5:00 | 3:20 | 2:30 | 2:00 | 1:40 |



| CATEGORY   | A                                | B   | C   | D |
|------------|----------------------------------|---|---|---|
| S-ILS 22L  | 216/40 200 (200- $\frac{3}{4}$ ) |   |   |   |
| S-LOC 22L* | 540/40 524 (600- $\frac{3}{4}$ ) | 540 - 1 $\frac{1}{2}$<br>524 (600-1 $\frac{1}{2}$ )   | 540 - 1 $\frac{3}{4}$<br>524 (600-1 $\frac{3}{4}$ ) |   |
| CIRCLING   | 640-1 621 (700-1)                | 640 - 1 $\frac{3}{4}$<br>621 (700 - 1 $\frac{3}{4}$ ) | 640 - 2<br>621 (700-2)                              |   |

✦

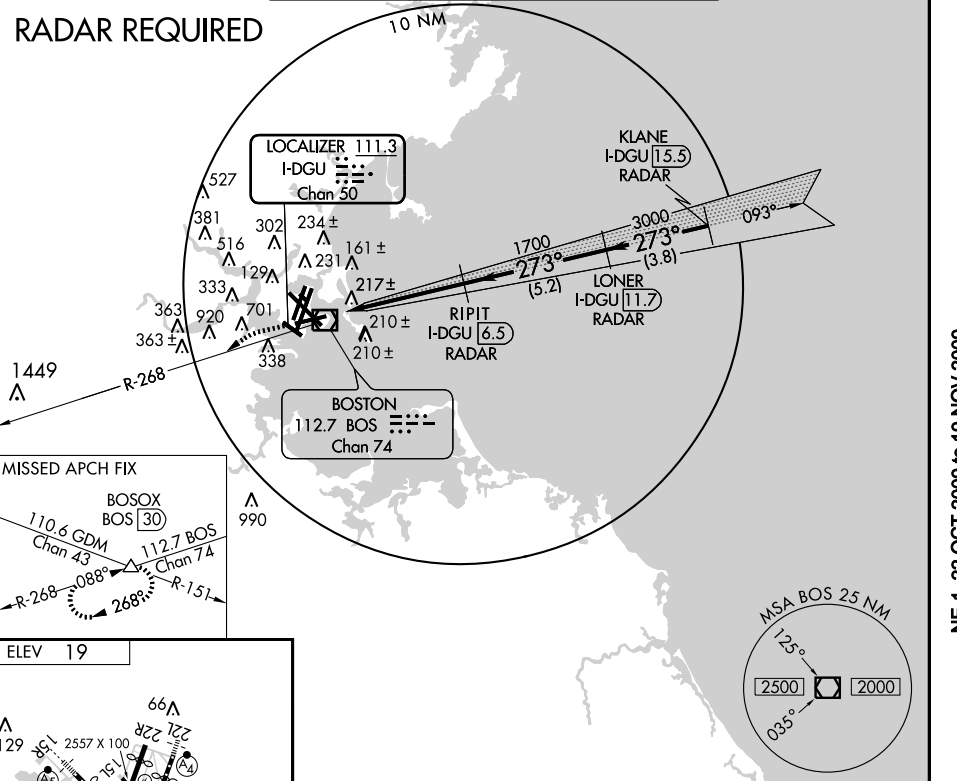
\* Radar or DME REQUIRED.

⚠

Cats C and D circling NA west of Rwy 4L and 15R.

MISSED APPROACH: Climb to 3000 via BOS  
VORTAC R-268 to BOSOX INT/BOS 30 DME  
and hold.

|      |         |                |       |                                      |               |         |              |
|------|---------|----------------|-------|--------------------------------------|---------------|---------|--------------|
| ATIS |         | BOSTON APP CON |       | BOSTON TOWER                         |               | GND CON | CLNC DEL     |
| ARR  | 135.0   | 120.6          | 263.1 | Rwys 4R-22L, 9-27                    | 132.225 257.8 | 121.9   | 121.65 257.8 |
| DEP  | 127.875 |                |       | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8 257.8   |         |              |



|            |  |        |  |                          |       |                            |  |                            |
|------------|--|--------|--|--------------------------|-------|----------------------------|--|----------------------------|
| ELEV 19    |  | 3000   |  | BOS R-268 112.7          | BOSOX | LONER I-DGU 111.7<br>RADAR |  | KLANE I-DGU 115.5<br>RADAR |
| TDZE 17    |  | 1700   |  | RIPIT I-DGU 6.5<br>RADAR |       | I-DGU 2.7                  |  | 4000                       |
| 1.2        |  | 3.8 NM |  | 5.2 NM                   |       | 3.8 NM                     |  | GS 3.00°<br>TCH 57         |
| CATEGORY   |  | A      |  | B                        |       | C                          |  | D                          |
| S-ILS 27   |  |        |  | 460-1½                   |       | 443 (500-1½)               |  |                            |
| S-LOC 27 * |  |        |  | 460-1½                   |       | 443 (500-1½)               |  |                            |
| CIRCLING   |  | 640-1½ |  | 621 (700-1½)             |       | 640-1¾<br>621 (700-1¾)     |  | 640-2<br>621 (700-2)       |

TDZ/CL Rwys 4R, 15R and 33L

REIL Rwys 4L, 27 and 32

MIRL Rwy 15L-33R

HIRL Rwys 4L-22R, 4R-22L, 14-32, 15R-33L and 9-27

FAF to MAP 3.8 NM

|         |      |      |      |      |      |
|---------|------|------|------|------|------|
| Knots   | 60   | 90   | 120  | 150  | 180  |
| Min:Sec | 3:48 | 2:32 | 1:54 | 1:31 | 1:16 |

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|                |             |          |              |
|----------------|-------------|----------|--------------|
| LOC/DME I-LIP  | APP CRS     | Rwy Idg  | <b>10083</b> |
| <b>110.7</b>   |             | TDZE     | <b>16</b>    |
| Chan <b>44</b> | <b>331°</b> | Apt Elev | <b>20</b>    |

**I LS RWY 33L (CAT II)**

BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

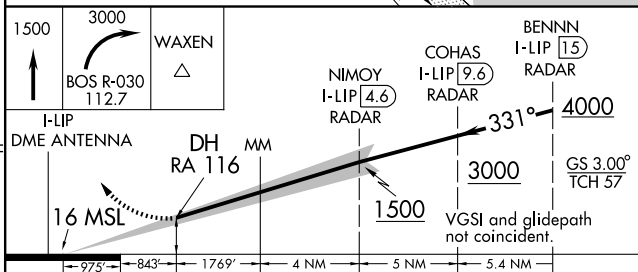
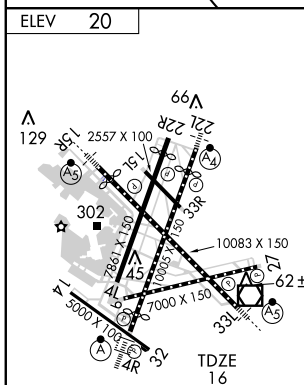
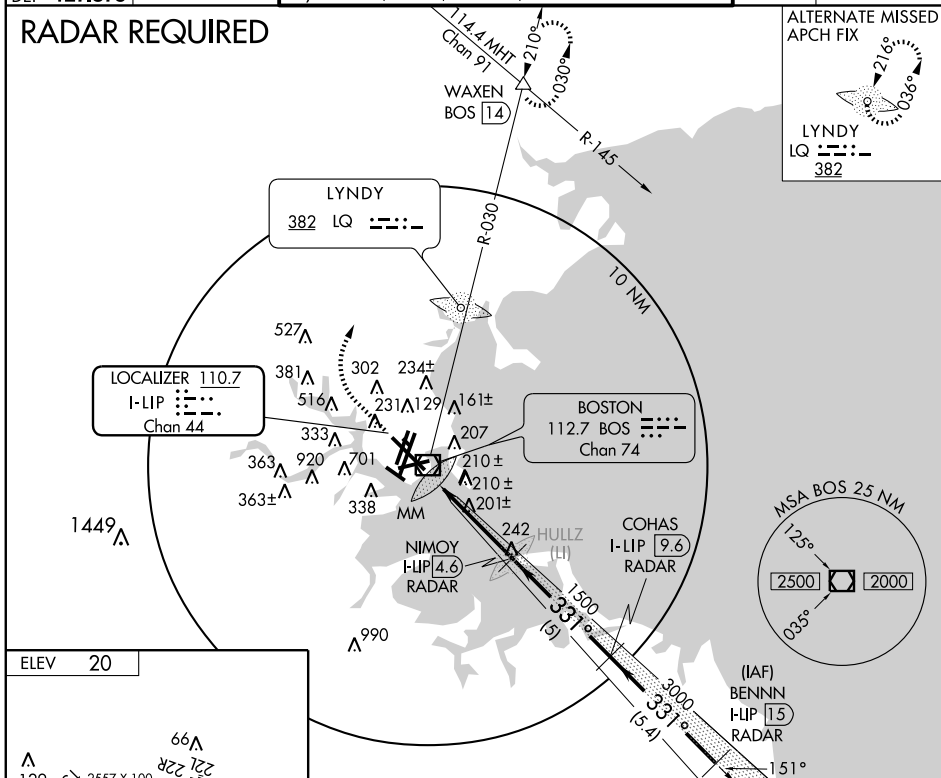
**T** Procedure does not meet ICAO standard for ALSF/TDZ/CL lighting systems. Authorization to conduct this approach requires specific OPSSPEC approval or LOA for this runway.  
DME or Radar required.

MALS

**MISSED APPROACH:** Climb to 1500 then climbing right turn to 3000 via BOS VOR/DME R-030 to WAXEN/BOS VOR/DME 14 DME and hold.

|      |         |                |       |                                      |               |         |              |
|------|---------|----------------|-------|--------------------------------------|---------------|---------|--------------|
| ATIS |         | BOSTON APP CON |       | BOSTON TOWER                         |               | GND CON | CLNC DEL     |
| ARR  | 135.0   |                |       | Rwys 4R-22L, 9-27                    | 132.225 257.8 |         |              |
| DEP  | 127.875 | 120.6          | 263.1 | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8 257.8   | 121.9   | 121.65 257.8 |

## RADAR REQUIRED

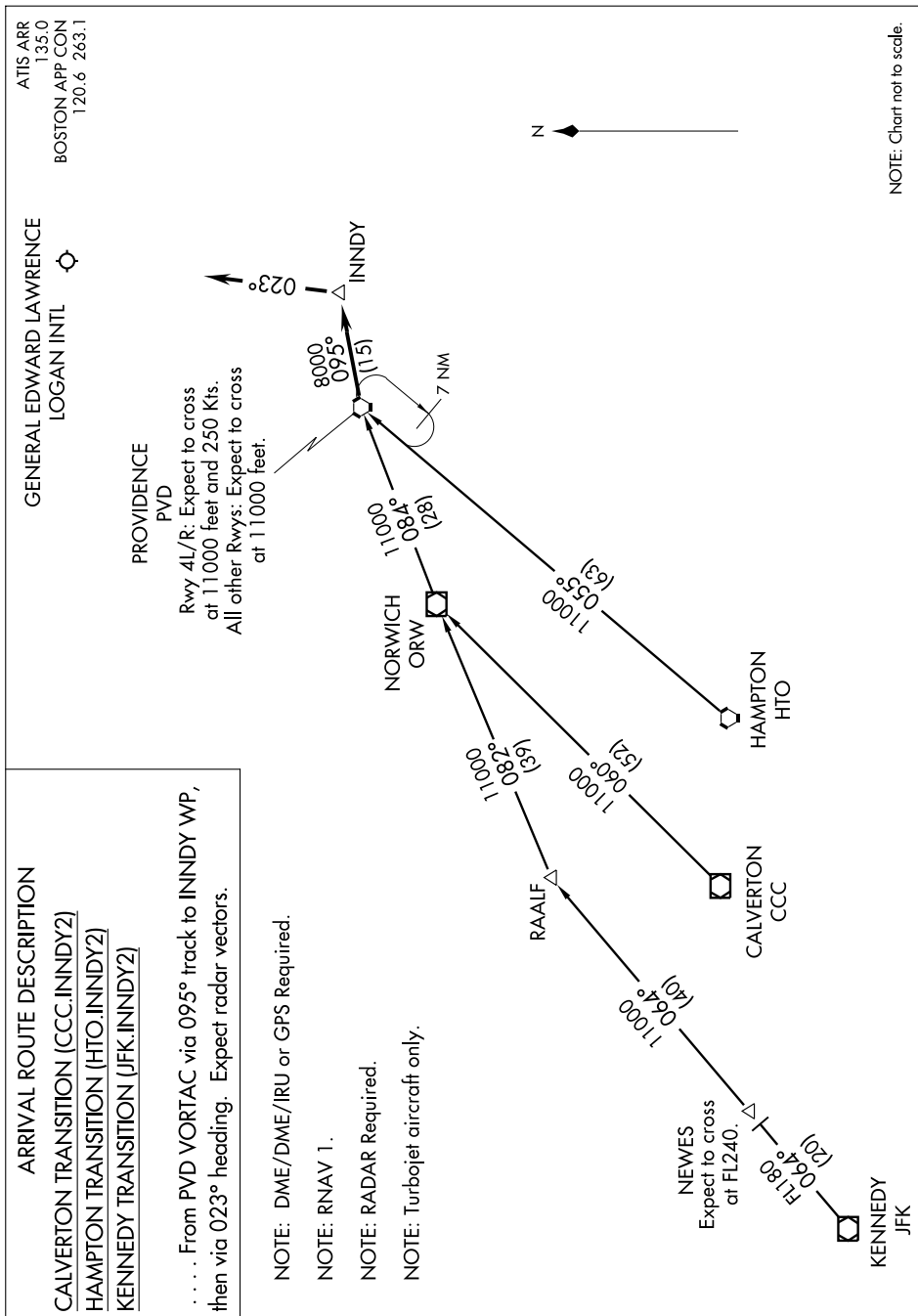


TDZ/CL Rwys 4R, 15R and 33L  
REIL Rwys 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwys 4L-22R, 4R-22L,  
14-32, 15R-33L and 9-27

| CATEGORY  | A                 | B | C | D |
|-----------|-------------------|---|---|---|
| S-ILS 33L | 116/12 100 RA 116 |   |   |   |

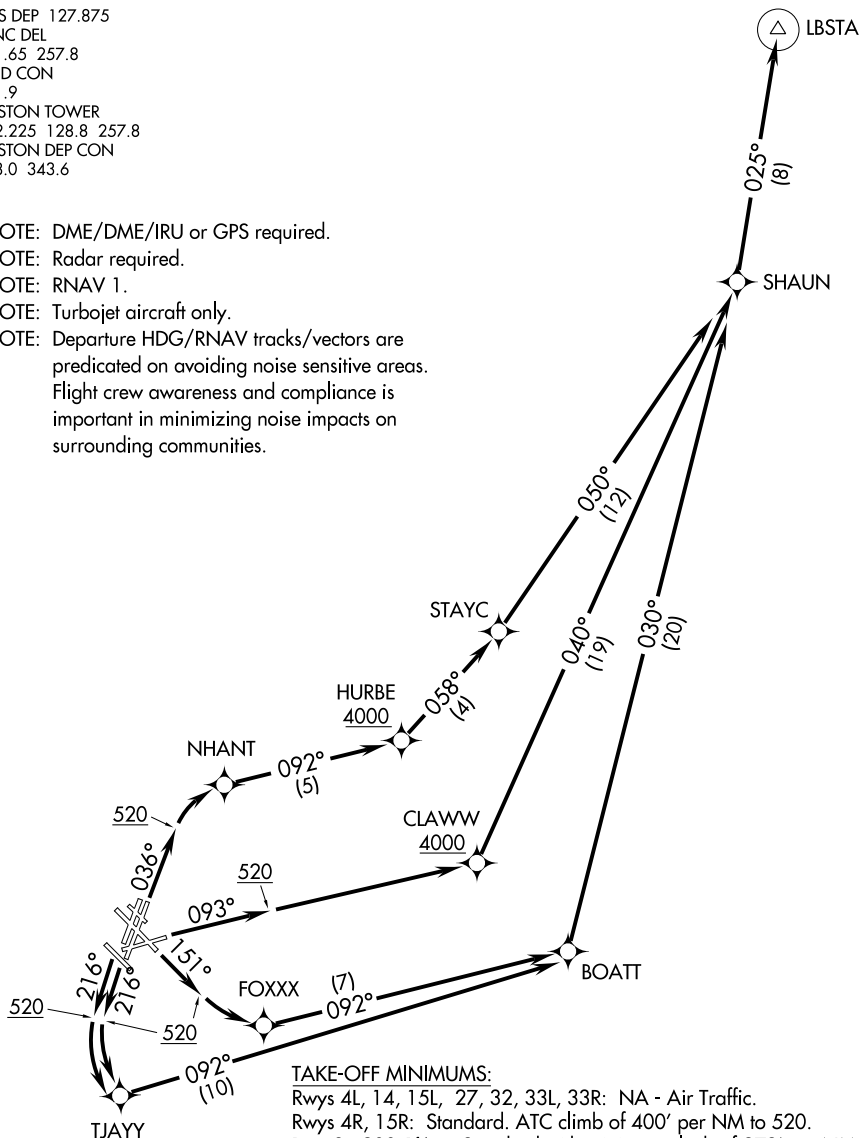
CATEGORY II - SPECIAL AIRCREW  
& AIRCRAFT CERTIFICATION REQUIRED

## INNDY TWO ARRIVAL (RNAV)



ATIS DEP 127.875  
 CLNC DEL  
 121.65 257.8  
 GND CON  
 121.9  
 BOSTON TOWER  
 132.225 128.8 257.8  
 BOSTON DEP CON  
 133.0 343.6

NOTE: DME/DME/IRU or GPS required.  
 NOTE: Radar required.  
 NOTE: RNAV 1.  
 NOTE: Turbojet aircraft only.  
 NOTE: Departure HDG/RNAV tracks/vectors are  
 predicated on avoiding noise sensitive areas.  
 Flight crew awareness and compliance is  
 important in minimizing noise impacts on  
 surrounding communities.



**TAKE-OFF MINIMUMS:**

Rwys 4L, 14, 15L, 27, 32, 33L, 33R: NA - Air Traffic.  
 Rwys 4R, 15R: Standard. ATC climb of 400' per NM to 520.  
 Rwy 9: 300-1¼ or Standard with minimum climb of 272' per NM to 300. ATC climb of 500' per NM to 4000.  
 Rwy 22L: 300-1 or Standard when tower reports no tall vessels in the departure area. ATC climb of 400' per NM to 520.  
 Rwy 22R: 300-1¾ or Standard with minimum climb of 320' per NM to 400. ATC climb of 400' per NM to 520.

NE-1, 22 OCT 2009 to 19 NOV 2009



## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 4R: Climb heading 036° to 520 MSL, then climb to assigned altitude direct NHANT, and via track 092° to HURBE, cross HURBE at or above 4000, thence...

TAKE-OFF RUNWAY 9: Climb heading 093° to 520 MSL, then climb to assigned altitude direct CLAWW, cross CLAWW at or above 4000 thence....

TAKE-OFF RUNWAY 15R: Climb heading 151° to 520 MSL, then climb to assigned altitude direct FOXXX, thence...

TAKE-OFF RUNWAY 22L/22R: Climb heading 215° to 520 MSL, then climb to assigned altitude direct TJAYY, thence...

....via depicted route to LBSTA. Maintain 5000' or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

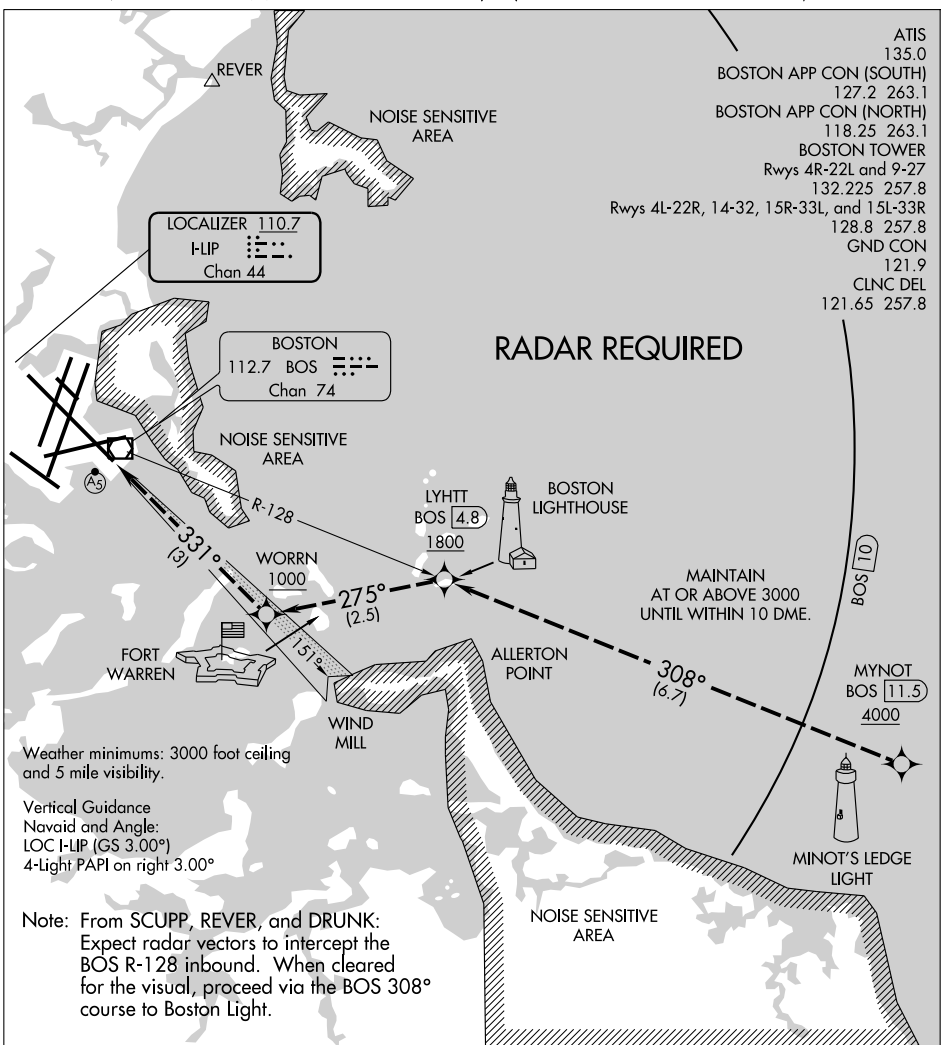
### TAKE-OFF OBSTACLES:

- Rwy 4R: Light on pole and multiple trees beginning 1807' from DER, 403' left of centerline, up to 33' AGL/79' MSL. Ship 579' from DER, on centerline, 50' AGL/50' MSL. Crane 2001' from DER, 434' right of centerline, 101' AGL/114' MSL. Mobile crane 2009' from DER, 206' right of centerline, 114' AGL/134 MSL.
- Rwy 9: Antenna on standpipe and tank beginning 5878' from DER, 1429' left of centerline, up to 138' AGL/217' MSL. Ship 763' from DER, on centerline, 65' AGL/65' MSL.
- Rwy 15R: Sign 45' from DER, 267' right of centerline, 6' AGL, 16' MSL.
- Rwy 22L: RIG 2441' from DER, 35' left of centerline, 176' AGL/176' MSL. Obstruction light pole 3586' from DER, 926' left of centerline, 108' AGL/128' MSL. Mobile crane 3676' from DER, 440' right of centerline, 122' AGL/145' MSL.
- Rwy 22R: RIG, 4586' from DER, 1535' left of centerline, 176' AGL/176' MSL. RIG 4064' from DER, 8' right of centerline, 176' AGL/176' MSL. Stacks 1.3 NM from DER, 1598' right of centerline, 255' AGL/278' MSL.



# LIGHT VISUAL RWY 33L

GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)  
AL-58 (FAA) BOSTON, MASSACHUSETTS



|      |   |   |   |   |   |   |   |   |    |    |  |
|------|---|---|---|---|---|---|---|---|----|----|--|
| 1 NM | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |
|------|---|---|---|---|---|---|---|---|----|----|--|



(NARRATIVE ON FOLLOWING PAGES)

## DEPARTURE ROUTE DESCRIPTION

JET AIRCRAFT:

TAKE-OFF RUNWAY 4R/L: Fly heading 036° to BOS 4 DME, then turn right heading 090°, thence....

TAKE-OFF RUNWAY 9: Fly heading 093°, thence....

TAKE-OFF RUNWAY 14: Fly heading 142° to BOS 1 DME, then turn left heading 120°, thence....

TAKE-OFF RUNWAY 15R: Fly heading 151° to BOS 1 DME, then turn left heading 120°, thence....

TAKE-OFF RUNWAY 22R/L: Turn left heading 140°, thence....

TAKE-OFF RUNWAY 27: Fly heading 273° to BOS 2.2 DME, then turn left heading 235°, thence....

TAKE-OFF RUNWAY 33L: Fly heading 331° to BOS 2 DME, then turn left heading 316°, thence....

NON JET AIRCRAFT: Climb on assigned heading, thence....

....expect radar vectors to assigned ROUTE/NAVAID/FIX. Jet aircraft maintain 5000' or lower assigned altitude. Non-jet aircraft maintain 3000' or lower assigned altitude. All aircraft expect clearance to filed altitude/flight level ten (10) minutes after departure.

NOTE: JET AIRCRAFT departure headings/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities. Aircraft that are initially vectored over water can expect to cross the coastline above 6000' before proceeding on course.

TAKE-OFF MINIMUMS:

RWY 15L, 32, 33R, NA - ENVIRONMENTAL.

RWY 4R, STANDARD.

RWY 4L, 300-1 or STANDARD with minimum climb of 358' per NM to 300'.

RWY 9, 300-1¼ or STANDARD with minimum climb of 272' per NM to 300'.

RWY 14, STANDARD with minimum ATC climb of 500' per NM to 420'.

RWY 15R, STANDARD with minimum ATC climb of 431' per NM to 420'.

RWY 22L, 300-1 or STANDARD when tower reports no tall vessels in the departure area.

RWY 22R, 300-1¾ or STANDARD with minimum climb of 320' per NM to 400'.

RWY 27, STANDARD with minimum climb of 477' per NM to 1300'.

RWY 33L, STANDARD with minimum ATC climb of 465' per NM to 200'.

(CONTINUED ON FOLLOWING PAGE)



## (CONTINUED)

TAKE-OFF OBSTACLES:

RWY 4L, Light on blast fence 184' from DER, 249' left of centerline, 6' AGL/23' MSL.

Tree 2094' from DER, 92' left of centerline, 47' AGL/77' MSL.

Tree 3975' from DER, 1486' left of centerline, 50' AGL/198' MSL.

Tree 4228' from DER, 544' left of centerline, 47' AGL/143' MSL.

Ship 694' from DER, on centerline, 50' AGL/50' MSL.

Light on blast fence 230' from DER, 63' right of centerline, 6' AGL/23' MSL.

Light on pole and mutple trees beginning 1806' from DER, 740' right of centerline, up to 33' AGL/79' MSL.

RWY 4R, Light on pole and mutple trees beginning 1807' from DER, 403' left of centerline, up to 33' AGL/79' MSL.

Ship 579' from DER, on centerline, 50' AGL/50' MSL.

Crane 2001' from DER, 434' right of centerline, 101' AGL/114' MSL.

Mobile crane 2009' from DER, 206' right of centerline, 114' AGL/134' MSL.

RWY 9, Antenna on standpipe and tank beginning 5878' from DER, 1429' left of centerline, up to 138' AGL/217' MSL.

Ship 763' from DER, on centerline, 65' AGL/65' MSL.

RWY 14, Ship rig 5439' from DER, 1824' right of centerline, 176' AGL/176' MSL.

RWY 15L, Sign 169' from DER, 279' right of centerline, 6' AGL/19' MSL.

RWY 15R, Sign 45' from DER, 267' right of centerline, 6' AGL/16' MSL.

RWY 22L, Rig 2441' from DER, 35' left of centerline, 176' AGL/176' MSL.

Obstruction light pole 3586' from DER, 926' left of centerline, 108' AGL/128' MSL.

Mobile crane 3676' from DER, 440' right of centerline, 122' AGL/145' MSL.

RWY 22R, Rig 4586' from DER, 1535' left of centerline, 176' AGL/176' MSL.

Rig 4064' from DER, 8' right of centerline, 176' AGL/176' MSL.

Stacks 1.3 NM from DER, 1598' right of centerline, 255' AGL/278' MSL.

RWY 27, Mutple buildings beginning 1.3 NM from DER, 129' left of centerline, up to 251' AGL/261' MSL.

Light pole and rod on pole beginning 1691' from DER, 749' right of centerline, up to 60' AGL/100' MSL.

Rig 4822' from DER, 35' right of centerline, 176' AGL/176' MSL.

Mutple buildings beginning 1.7 NM from DER, 1479' right of centerline, up to 685' AGL/701' MSL.

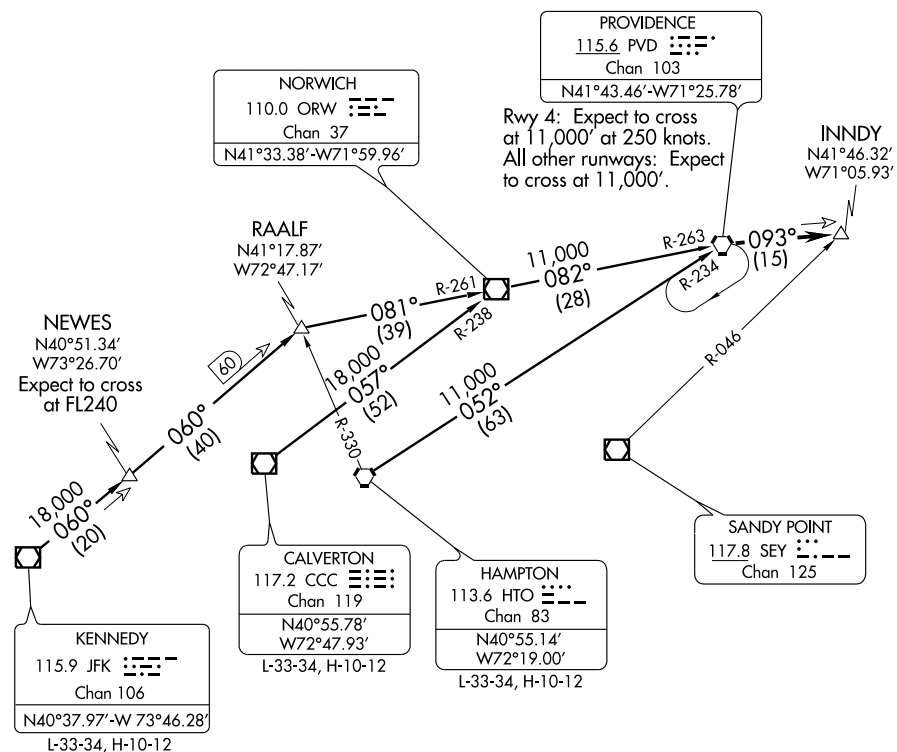
RWY 33L, Mutple lights, rod on tank and light on building 796' from DER, 604' left of centerline, up to 46' AGL/73' MSL.

Building and chimney on building beginning 4301' from DER, 1079' left of centerline, up to 40' AGL/149' MSL.

Bridge 1.4 NM from DER, 2615' left of centerline, 263' AGL/263' MSL.

Mutple trees, wind direction indicator on tower and sign beginning 249' from DER, 51' right of centerline, up to 35' AGL/101' MSL.

ATIS ARR 135.0



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NOTE: For turbojet only.

NOTE: Chart not to scale.

CALVERTON TRANSITION (CCC. ORW3): From over CCC VOR/DME via CCC R-057 and ORW R-238 to ORW VOR/DME, then via ORW R-082 and PVD R-263 to PVD VORTAC. Thence....

HAMPTON TRANSITION (HTO.ORW3): From over HTO VORTAC via HTO R-052 and PVD R-234 to PVD VORTAC. Thence....

KENNEDY TRANSITION (JFK.ORB3): From over JFK VOR/DME via R-060 to RAALF INT, then via ORW R-261 to ORW VOR/DME, then via ORW R-082 and PVD R-263 to PVD VORTAC. Thence....

...From over PVD VORTAC via PVD R-093 to INNDY INT. Expect radar vectors to final approach course.





## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 4R: Climb heading 036° to 520 MSL, then climb to assigned altitude direct NHANT, and via track 092° to HURBE, cross HURBE at or above 4000, and via track 119° to WAALI and track 173° to BSQUE and track 200° to CHWDH and track 239° to STEEM and track 267° to PATSS, thence...

TAKE-OFF RUNWAY 9: Climb heading 093° to 520 MSL, then climb to assigned altitude direct CLAWW, cross CLAWW at or above 4000, and via track 124° to FENWY and track 189° to GLEET and track 253° to WYMTH and track 275° to PATSS, thence....

TAKE-OFF RUNWAY 15R: Climb heading 151° to 520 MSL, then climb to assigned altitude direct FOXXX and via track 095° to BRRRO and track 125° to CHWDH and track 159° to GLEET and track 210° to BONNZ and track 257° to BTENA and track 284° to ROEDE and 285° to PATSS, thence...

TAKE-OFF RUNWAY 22L/22R: Climb heading 215° to 520 MSL, then climb to assigned altitude direct TJAYY and via track 093° to BRRRO and track 125° to CHWDH and track 159° to GLEET and track 210° to BONNZ and track 257° to BTENA and track 284° to ROEDE and 285° to PATSS, thence...

...Maintain 5000' or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

### DEDHM TRANSITION (PATSS1.DEDHM):

#### TAKE-OFF OBSTACLES:

- Rwy 4R: Light on pole and multiple trees beginning 1807' from DER, 403' left of centerline, up to 33' AGL/79' MSL. Ship 579' from DER, on centerline, 50' AGL/50' MSL. Crane 2001' from DER, 434' right of centerline, 101' AGL/114' MSL. Mobile crane 2009' from DER, 206' right of centerline, 114' AGL/134 MSL.
- Rwy 9: Antenna on standpipe and tank beginning 5878' from DER, 1429' left of centerline, up to 138' AGL/217' MSL. Ship 763' from DER, on centerline, 65' AGL/65' MSL.
- Rwy 15R: Sign 45' from DER, 267' right of centerline, 6' AGL, 16' MSL.
- Rwy 22L: RIG 2441' from DER, 35' left of centerline, 176' AGL/176' MSL. Obstruction light pole 3586' from DER, 926' left of centerline, 108' AGL/128' MSL. Mobile crane 3676' from DER, 440' right of centerline, 122' AGL/145' MSL.
- Rwy 22R: RIG, 4586' from DER, 1535' left of centerline, 176' AGL/176' MSL. RIG 4064' from DER, 8' right of centerline, 176' AGL/176' MSL. Stacks 1.3 NM from DER, 1598' right of centerline, 255' AGL/278' MSL.

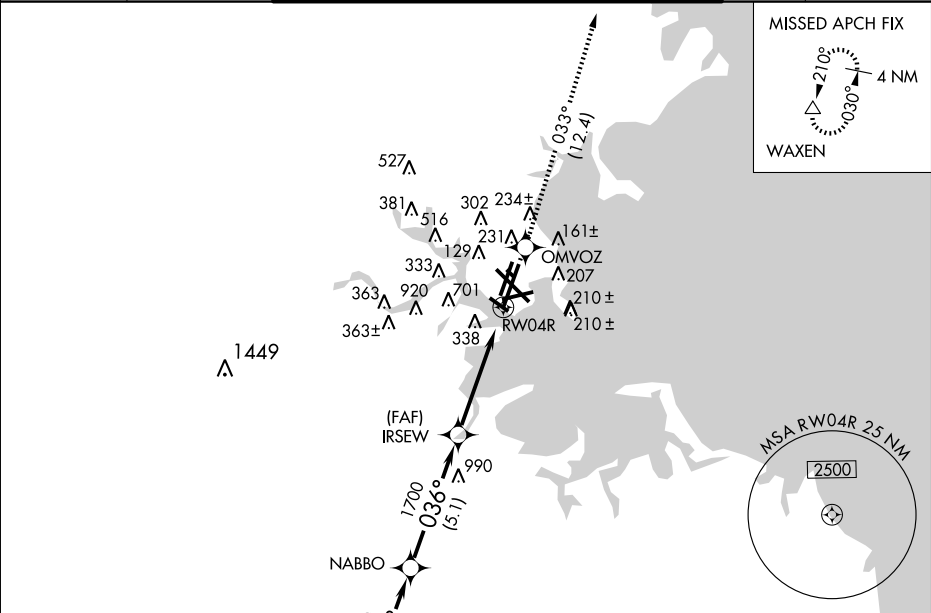
|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 8851 |
| 036°    | TDZE     | 18   |
|         | Apt Elev | 19   |

# RNAV (GPS) RWY 4R

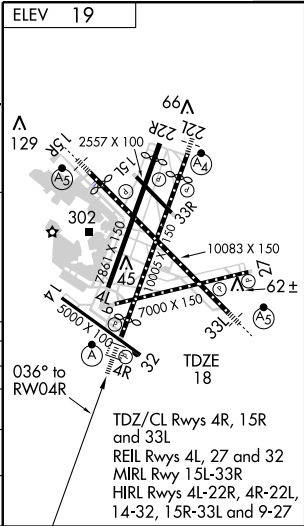
BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

|  |        |  |
|--|--------|--|
| CATs C and D circling not authorized west of Rwy 4L and 15R.<br>Baro-VNAV NA below -15°C (5°F).                              | ALSF-2 | MISSED APPROACH: Climb to 3000 direct OMVOZ WP then left turn via 033° track to WAXEN WP and hold. |
| When control tower reports tall vessels in approach area, LNAV/VNAV DA NA, increase LNAV CAT A and B visibility to RVR 4000. |        |  |
| GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.   |        |  |

|             |                |  |         |              |
|-------------|----------------|--|---------|--------------|
| ATIS        | BOSTON APP CON | BOSTON TOWER                                     | GND CON | CLNC DEL     |
| ARR 135.0   | 120.6 263.1    | Rwys 4R-22L, 9-27 132.225 257.8                  | 121.9   | 121.65 257.8 |
| DEP 127.875 |                | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R 128.8 257.8 |         |              |



|                   |                     |                    |                     |       |       |
|-------------------|---------------------|--------------------|---------------------|-------|-------|
| Procedure Turn NA | WINNI               | NABBO              | IRSEW               | OMVOZ | WAXEN |
| 4000              | 3000                | 1700               |                     |       |       |
| GS 3.00° TCH 51   | 5 NM                | 5.1 NM             | 3.5 NM              | 1.5   |       |
| CATEGORY          | A                   | B                  | C                   | D     |       |
| GLS PA DA         | NA                  |                    |                     |       |       |
| LNAV/VNAV DA      | 560-1½ 542 (600-1½) |                    |                     |       |       |
| LNAV MDA          | 560/24 542 (600-½)  | 560/50 542 (600-1) | 560/60 542 (600-1¼) |       |       |
| CIRCLING          | 640-2 621 (700-2)   |                    |                     |       |       |






|             |          |             |
|-------------|----------|-------------|
| APP CRS     | Rwy Idg  | <b>9201</b> |
| <b>149°</b> | TDZE     | <b>17</b>   |
|             | Apt Elev | <b>19</b>   |

## RNAV (GPS) RWY 15R

BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

 CATs C and D circling not authorized west of Rwy 4L and 15R.  
 NA Baro-VNAV NA below -15°C (5°F).  
 GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MALSR

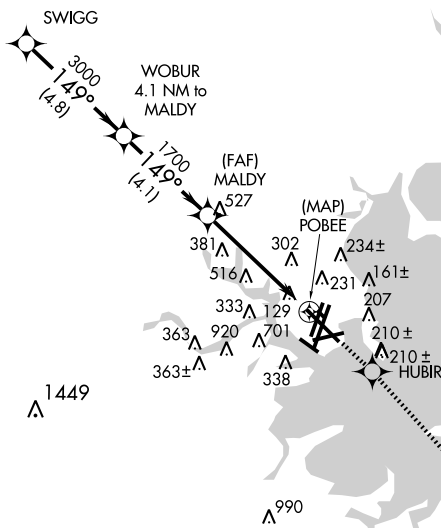
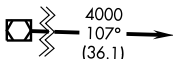
**MISSED APPROACH:** Climb to 3000 direct HUBIR WP and via 154° track to CELTS WP and hold.

|      |         |                |       |                                      |              |       |       |         |          |
|------|---------|----------------|-------|--------------------------------------|--------------|-------|-------|---------|----------|
| ATIS |         | BOSTON APP CON |       |                                      | BOSTON TOWER |       |       | GND CON | CLNC DEL |
| ARR  | 135.0   | 120.6          | 263.1 | Rwys 4R-22L, 9-27                    | 132.225      | 257.8 | 121.9 | 121.65  | 257.8    |
| DEP  | 127.875 |                |       | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8        | 257.8 |       |         |          |

IAF

**IAF** ARM APPROACH MODE PRIOR TO IAF.

GARDNER  
GDM



MSA POBEE 23 NM

2500

1449

990

CELTS



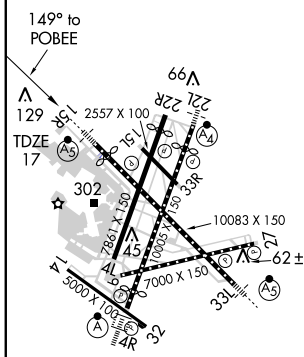
154°

334°

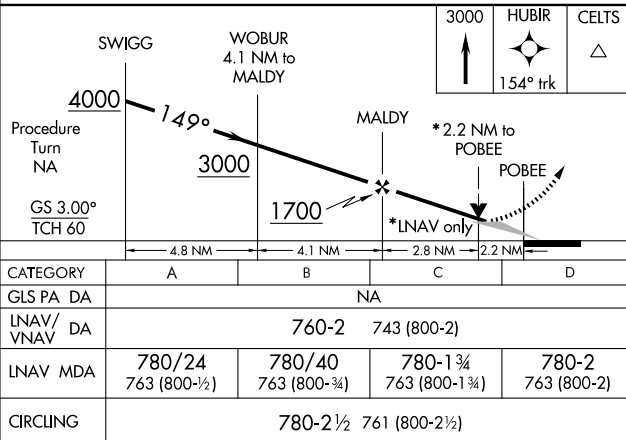
4 NM


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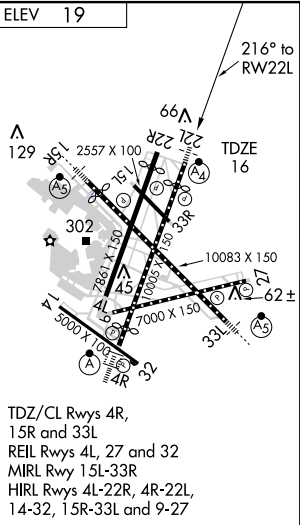
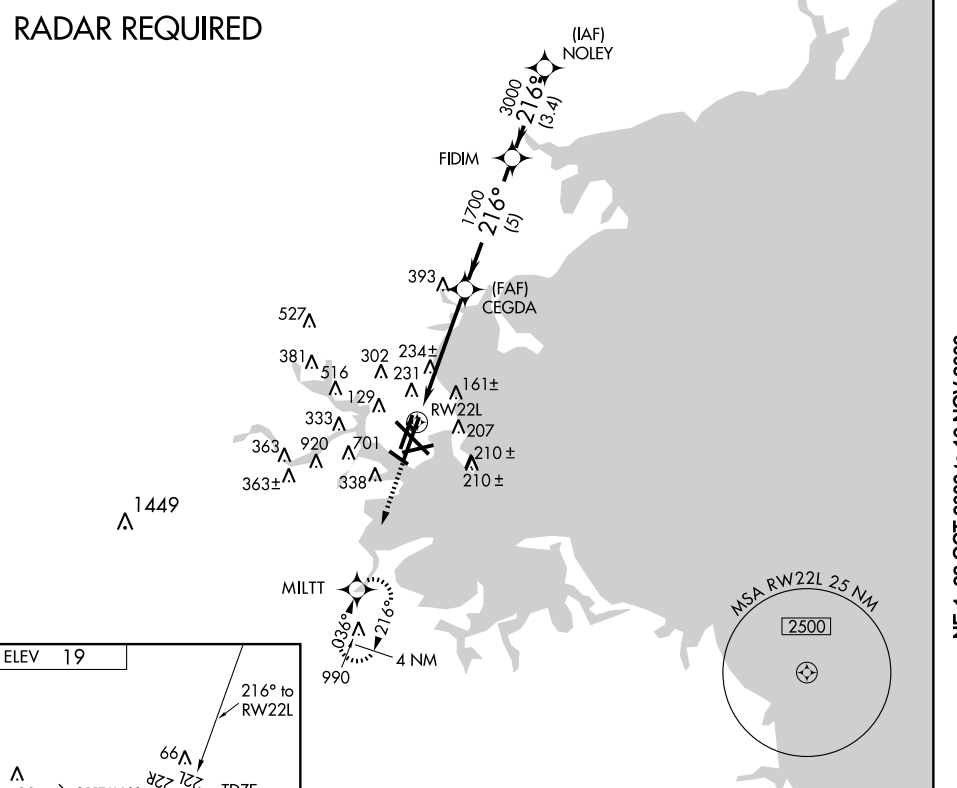
ELEV 19



TDZ/CL Rwy 4R,  
15R and 33L  
REIL Rwy 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwy 4L-22R, 4R-22L,  
14-32, 15R-33L and 9-27



|         |   |                |                                      |  |   |               |
|---------|---|----------------|--------------------------------------|--|---|---------------|
| ▼<br>NA | CATs C and D circling not authorized west of Rwy 4L and 15R.<br>Inoperative table does not apply to LNAV Cat C.<br>GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. |                |                                      | MALSF<br> | MISSED APPROACH: Climb to 3000<br>direct MILTT WP and hold. |               |
|         |   |                |                                      |  |   |               |
| ATIS    |   | BOSTON TOWER   |                                      | GND CON  | CLNC DEL  |               |
| ARR     | 135.0   | BOSTON APP CON | Rwys 4R-22L, 9-27                    |  |   | 132.225 257.8 |
| DEP     | 127.875   | 120.6 263.1    | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8 257.8  | 121.9   | 121.65 257.8  |



TDZ/CL Rwys 4R, 15R and 33L  
REIL Rwys 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwys 4L-22R, 4R-22L, 14-32, 15R-33L and 9-27

|                   |        |             |                        |                        |  |
|-------------------|--------|-------------|------------------------|------------------------|--|
| 3000 MILTT        |        | NOLEY       |                        |                        |  |
| 1.7 NM to RWY 22L |        | CEGDA       | FIDIM                  | NOLEY                  |  |
| RWY 22L           |        | 1700        | 3000                   | 4000                   |  |
| 1.7 NM            |        | 3.4 NM      | 5 NM                   | 3.4 NM                 |  |
| CATEGORY          | A      | B           | C                      | D                      |  |
| LNAV MDA          | 600/40 | 584 (600-¾) | 600-1½<br>584 (600-1½) | 600-1¾<br>584 (600-1¾) |  |
| CIRCLING          | 640-1  | 621 (700-1) | 640-1¾<br>621 (700-1¾) | 640-2<br>621 (700-2)   |  |

NE-1: 22 OCT 2009 to 19 NOV 2009

AL-58 (FAA)

|             |          |             |
|-------------|----------|-------------|
| APP CRS     | Rwy Idg  | <b>7000</b> |
| <b>273°</b> | TDZE     | <b>17</b>   |
|             | Apt Elev | <b>19</b>   |

## RNAV (GPS) RWY 27

BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

|  |   |             |                |                                      |   |               |         |              |
|--|---|-------------|----------------|--------------------------------------|---|---------------|---------|--------------|
| <div><div><div></div><div></div><div></div></div><div>NA</div></div> | CATs C and D circling not authorized west of Rwy 4L and 15R.<br>Baro-VNAV NA below -15°C (5°F).<br>GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. |             |                |                                      | MISSED APPROACH: Climb to 3000 direct<br>WANTU WP and 267° track to BOSOX WP<br>and hold. |               |         |              |
|  | ATIS  |             | BOSTON APP CON |                                      | BOSTON TOWER  |               | GND CON | CLNC DEL     |
| ARR  | 135.0   | 120.6 263.1 |                | Rwys 4R-22L, 9-27                    |   | 132.225 257.8 |         |              |
| DEP  | 127.875   |             |                | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R |   | 128.8 257.8   | 121.9   | 121.65 257.8 |

MISSED APCH FIX

BOSOX

1449

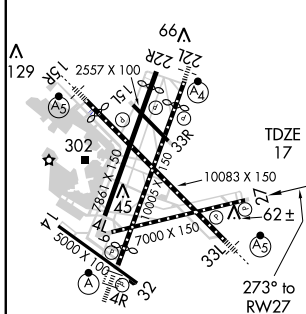
## RADAR REQUIRED

MSA RW 27 25 NM

2500



|      |    |
|------|----|
| ELEV | 19 |
|------|----|



TDZ/CL Rwy 4R,  
15R and 33L  
REIL Rwy 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwy 4L-22R, 4R-22L,  
14-32, 15R-33L and 9-27

|   |                     |             |                     |  |                   |
|---|---------------------|-------------|---------------------|--|-------------------|
| 3000<br>↑   | WANTU<br>✦          | 267°<br>trk | BOSOX<br>△          | VGSJ and descent<br>angles not coincident. | KLANE             |
|   |                     |             |                     |  |                   |
| * LNAV only<br>* 1.7 NM to RW27<br>RW27<br>RIPIT<br>LONER<br>3000<br>1700<br>273°<br>4000<br>GS 3.00°<br>TCH 57 |                     |             |                     |  |                   |
| CATEGORY  | A                   |             | B                   |  | D                 |
| GLS PA DA   | NA                  |             |                     |  |                   |
| LNAV/VNAV   | 480-1½ 463 (500-1½) |             |                     |  |                   |
| LNAV MDA  | 640-1 623 (700-1)   |             | 640-1¾ 623 (700-1¾) |  | 640-2 623 (700-2) |
| CIRCLING  | 640-1½ 621 (700-1½) |             | 640-1¾ 621 (700-1¾) |  | 640-2 621 (700-2) |

NE-1. 22 OCT 2009 to 19 NOV 2009

|             |          |      |
|-------------|----------|------|
| APP CRS     | Rwy Idg  | 5000 |
| <b>332°</b> | TDZE     | 20   |
|             | Apt Elev | 20   |

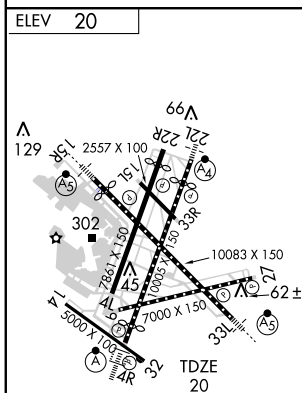
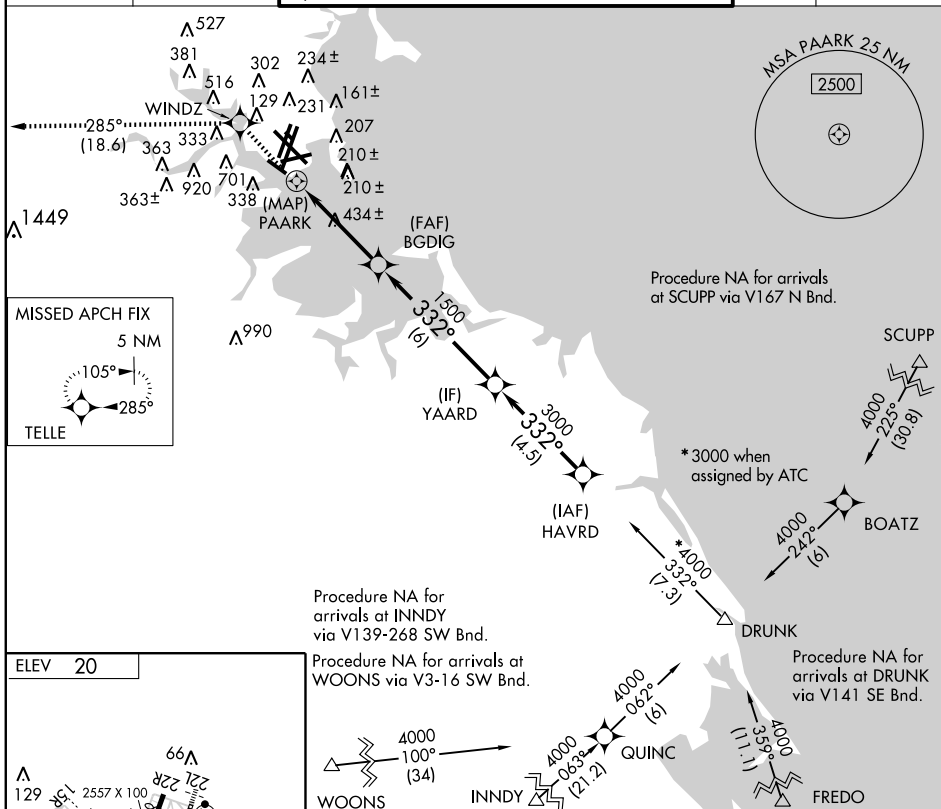
## RNAV (GPS) RWY 32

BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

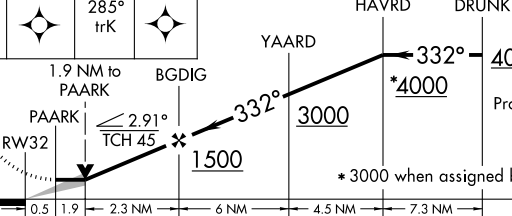
**T** DME/DME RNP-0.3 NA. Circling to Rwy 14 NA.  
**A** Circling NA for Cats B, C and D west of Rwy 4L and 15R.

**MISSED APPROACH:** Climb to 3000 direct WINDZ and via 285° track to TELLE and hold.

|      |         |                |       |                                      |              |       |       |         |          |
|------|---------|----------------|-------|--------------------------------------|--------------|-------|-------|---------|----------|
| ATIS |         | BOSTON APP CON |       |                                      | BOSTON TOWER |       |       | GND CON | CLNC DEL |
| ARR  | 135.0   | 120.6          | 263.1 | Rwys 4R-22L, 9-27                    | 132.225      | 257.8 |       |         |          |
| DEP  | 127.875 |                |       | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8        | 257.8 | 121.9 | 121.65  | 257.8    |



TDZ/CL Rwy 4R,  
15R and 33L  
REIL Rwy 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwy 4L-22R, 4R-22L,  
14-32, 15R-33L and 9-27

|           |                      |             |                        |   |                         |      |                        |      |                         |
|-----------|----------------------|-------------|------------------------|---|-------------------------|------|------------------------|------|-------------------------|
| 3000<br>↑ | WINDZ<br>✦           | 285°<br>TrK | TELLE<br>✦             |  |                         |      |                        |      |                         |
|           |                      |             |                        | YAARD   | 332°                    | 3000 | 332°                   | 4000 | Procedure<br>Turn<br>NA |
|           |                      |             |                        | * 3000 when assigned by ATC.  |                         |      |                        |      |                         |
| CATEGORY  | A                    |             | B                      |   | C                       |      | D                      |      |                         |
| LNAV MDA  | 820-1<br>800 (800-1) |             | 820-1¼<br>800 (800-1¼) |   | 820-2¼<br>800 (800-2¼)  |      | 820-2½<br>800 (800-2½) |      |                         |
| CIRCLING  | 960-1¼ 940 (1000-1¼) |             |                        |   | 960-2¾<br>940 (1000-2¾) |      | 960-3<br>940 (1000-3)  |      |                         |

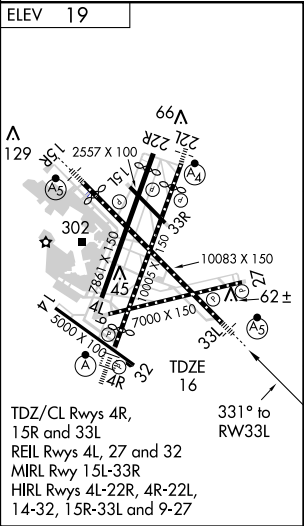
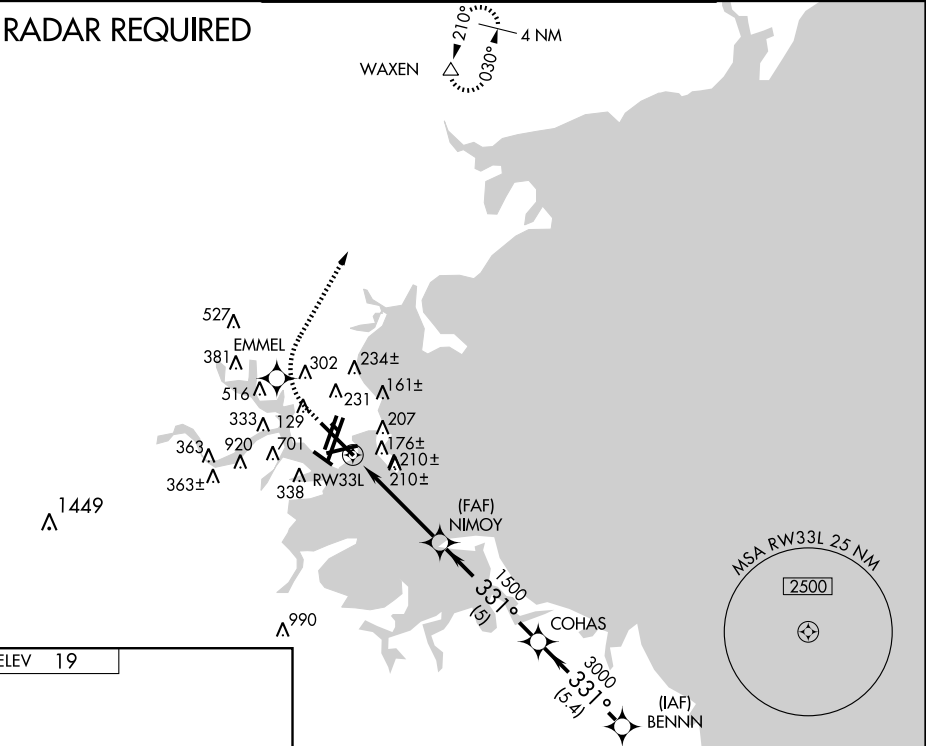
|         |          |
|---------|----------|
| APP CRS | Rwy Idg  |
| 331°    | 10083    |
|         | TDZE     |
|         | 16       |
|         | Apt Elev |
|         | 19       |

RNAV (GPS) RWY 33L

BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

|  |                |             |                                      |               |         |              |
|--|----------------|-------------|--------------------------------------|---------------|---------|--------------|
| <div><div><div>▼</div><div>NA</div><div>W</div></div><div>Baro-VNAV NA below -15°C (5°F).<br/>DME/DME RNP-0.3 NA.<br/>Cats C and D Circling not authorized west of Rwy 4L and 15R.</div></div> <div><div>MALS</div><div>AS</div><div>MISSED APPROACH: Climb to 3000 direct<br/>EMMEL WP and via 045° track to WAXEN WP<br/>and hold.</div></div> |                |             |                                      |               |         |              |
| ATIS   | BOSTON APP CON |             | BOSTON TOWER                         |               | GND CON | CLNC DEL     |
| ARR  | 135.0          | 120.6 263.1 | Rwys 4R-22L, 9-27                    | 132.225 257.8 |         |              |
| DEP  | 127.875        |             | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8 257.8   | 121.9   | 121.65 257.8 |

RADAR REQUIRED

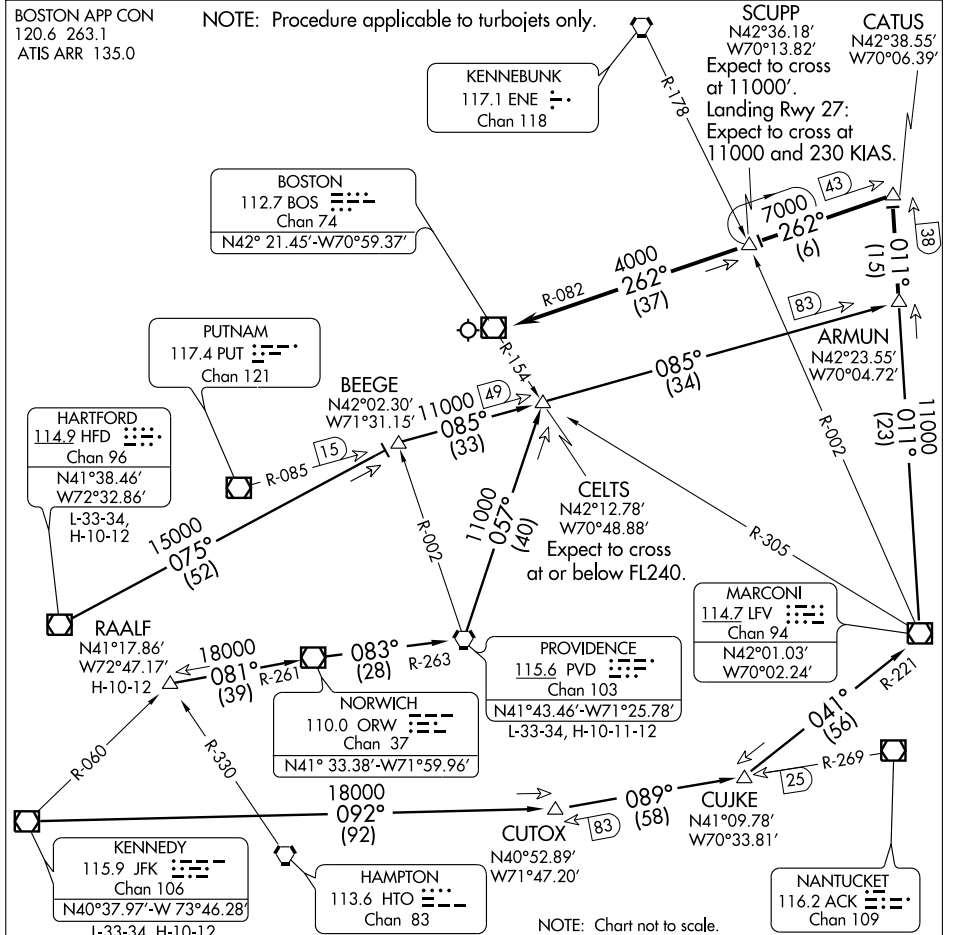


|                           |                    |                       |                    |       |
|---------------------------|--------------------|-----------------------|--------------------|-------|
| 3000                      | EMMEL              | 045° trK              | WAXEN              | BENNN |
|                           |                    |                       |                    |       |
| *INAV only                |                    |                       |                    |       |
| *1.3 NM to RWY33L         |                    |                       |                    |       |
| NIMOY                     |                    |                       |                    |       |
| COHAS                     |                    |                       |                    |       |
| 331° 4000                 |                    |                       |                    |       |
| 3000                      |                    |                       |                    |       |
| 1500                      |                    |                       |                    |       |
| GS 3.00° TCH 57           |                    |                       |                    |       |
| 1.3 NM 3.2 NM 5 NM 5.4 NM |                    |                       |                    |       |
| CATEGORY                  | A                  | B                     | C                  | D     |
| GLS PA DA                 | NA                 |                       |                    |       |
| INAV/VNAV DA              | 480/50 464 (500-1) |                       |                    |       |
| INAV MDA                  | 480/24 464 (500-½) | 480/40 464 (500-¾)    | 480/50 464 (500-1) |       |
| CIRCLING                  | 640-1 621 (700-1)  | 640-1 ¾ 621 (700-1 ¾) | 640-2 621 (700-2)  |       |

## SCUPP FOUR ARRIVAL

BOSTON APP CON  
120.6 263.1  
ATIS ARR 135.0

NOTE: Procedure applicable to turbojets only.



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HARTFORD TRANSITION (HFD.SCUPP4): From over HFD VOR/DME via HFD R-075 to BEEGE INT, then via PUT R-085 to ARMUN INT. Thence....

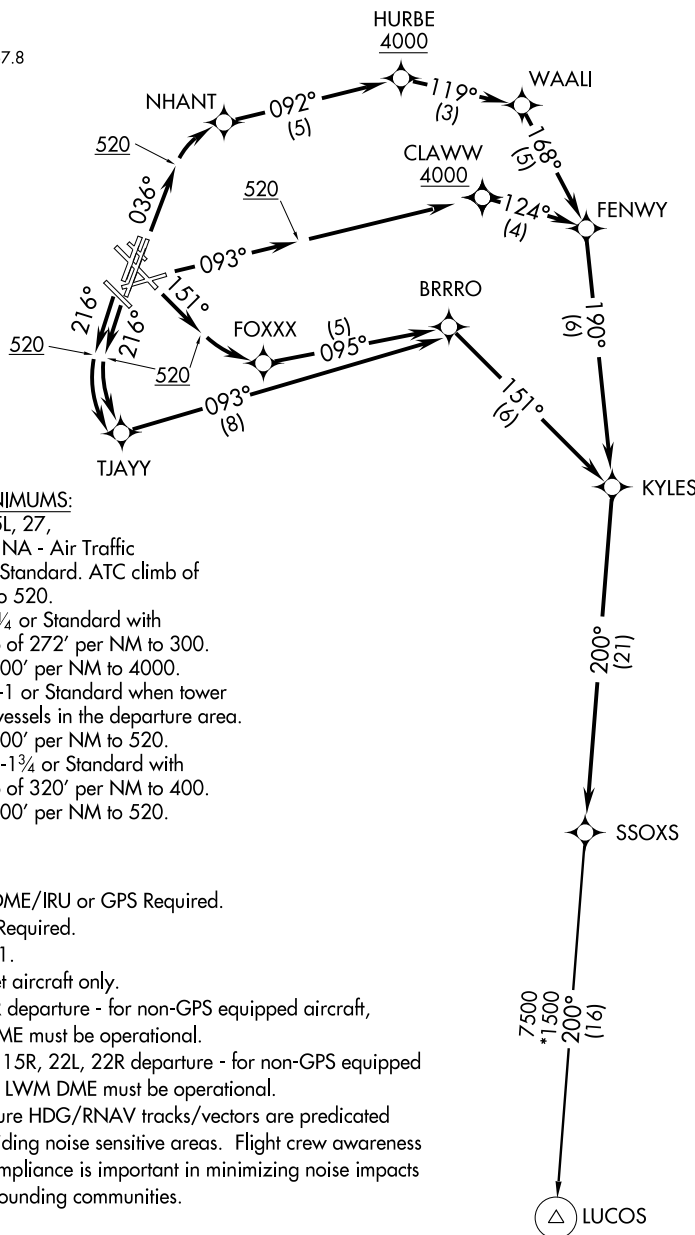
KENNEDY TRANSITION (JFK.SCUPP4): From over JFK VOR/DME via JFK R-092 to CUTOX INT, then via ACK R-269 to CUJKE INT, then via LFV R-221 to LFV VOR/DME, then via LFV R-011 to ARMUN INT. Thence....

PROVIDENCE TRANSITION (PVD.SCUPP4): From over the PVD VORTAC via PVD R-057 to CELTS INT, then via PUT R-085 to ARMUN INT. Thence....

RAALF TRANSITION (RAALF.SCUPP4): From over RAALF INT via ORW R-261 to ORW VOR/DME, then via PVD R-263 to PVD VORTAC, then via PVD R-057 to CELTS INT, then via PUT R-085 to ARMUN INT. Thence....

...From over ARMUN INT via LFV VOR/DME R-011 to CATUS INT, then via BOS VOR/DME R-082 to SCUPP INT, then via BOS R-082 to BOS VOR/DME. Expect radar vectors to final approach course prior to BOS VOR/DME.

ATIS DEP 127.875  
 CLNC DEL  
 121.65 257.8  
 GND CON  
 121.9  
 BOSTON TOWER  
 132.225 128.8 257.8  
 BOSTON DEP CON  
 133.0 343.6





## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 4R: Climb heading 036° to 520 MSL, then climb to assigned altitude direct NHANT, and via track 092° to HURBE, cross HURBE at or above 4000, thence...

TAKE-OFF RUNWAY 9: Climb heading 093° to 520 MSL, then climb to assigned altitude direct CLAWW, cross CLAWW at or above 4000, thence....

TAKE-OFF RUNWAY 15R: Climb heading 151° to 520 MSL, then climb to assigned altitude direct FOXXX, thence...

TAKE-OFF RUNWAYS 22L/22R: Climb heading 216° to 520 MSL, then climb to assigned altitude direct TJAYY, thence...

... via depicted route to SSOXS. Maintain 5000' or lower assigned altitude.  
Expect clearance to filed altitude/flight level ten (10) minutes after departure.

LUCOS TRANSITION (SSOXS1.LUCOS):

TAKE-OFF OBSTACLES:

RWY 4R: Light on pole and multiple trees beginning 1807' from DER, 403' left of centerline, up to 33' AGL/79' MSL. Ship 570' from DER, on centerline, 50' AGL/50' MSL. Crane 2,001' from DER, 434' right of centerline, 101' AGL/114' MSL. Mobile crane 2009' from DER, 206' right of centerline, 114' AGL/134 MSL.

RWY 9: Antenna on standpipe and tank beginning 5878' from DER, 1429' left of centerline, up to 138' AGL/217' MSL. Ship 763' from DER, on centerline, 65' AGL/65' MSL.

RWY 15R: Sign 45' from DER, 267' right of centerline, 6' AGL, 16' MSL.

RWY 22L: RIG 2441' from DER, 35' left of centerline, 176' AGL/176' MSL. Obstruction light pole 3586' from DER, 926' left of centerline, 108' AGL/128' MSL. Mobile crane 3676' from DER, 440' right of centerline, 122' AGL/145' MSL.

RWY 22R: RIG, 4586' from DER, 1535' left of centerline, 176' AGL/176' MSL. RIG 4064' from DER, 8' right of centerline, 176' AGL/176' MSL. Stacks 1.3 NM from DER, 1598' right of centerline, 255' AGL/278' MSL.



Circling not authorized for CATs C and D Rwy 4L clockwise to Rwy 15R.

MISSED APPROACH: Climb to 1500, then climbing right turn to 3000 via BOS R-030 to WAXEN Int/BOS 14 DME and hold.

| ATIS |         | BOSTON APP CON |             | BOSTON TOWER                         |               | GND CON | CLNC DEL     |
|------|---------|----------------|-------------|--------------------------------------|---------------|---------|--------------|
| ARR  | 135.0   | BOSTON APP CON | 120.6 263.1 | Rwys 4R-22L, 9-27                    | 132.225 257.8 | 121.9   | 121.65 257.8 |
| DEP  | 127.875 |                |             | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R | 128.8 257.8   |         |              |

MSA BOS 25 NM

2500 2000

125° 035°

114.4 MHT Chon 91

WAXEN BOS 14

R-145

R-030

10 NM

BOSTON 112.7 BOS Chan 74

527 381 302 234± 161± 207 210± 216 BEEJE BOS 5 RADAR 520 MINNT BOS 10 RADAR 1500 310° (5) 3000 310° (3.9) LR-120 LR-140 R-046 4000 046° (21.5) BURDY 117.8 SEY Chan 125 (IAF) KYLES BOS 13.9 RADAR R-130 TONNI 4000 228° (7.8)

1449

990

ELEV 19

TDZ/CL Rwys 4R, 15R and 33L  
REIL Rwys 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwys 4L-22R, 4R-22L, 14-32, 15R-33L and 9-27

310° to BOS VOR/DME

|           |                   |                   |                       |                      |
|-----------|-------------------|-------------------|-----------------------|----------------------|
| 1500 3000 | BOS R-030 112.7   | WAXEN             | MINNT BOS 10 RADAR    | KYLES BOS 13.9 RADAR |
|           |                   | BEEJE BOS 5 RADAR |                       |                      |
| VOR/DME   | 1500              | 3000              | 4000                  | Procedure Turn NA    |
|           | 5 NM              | 5 NM              | 3.9 NM                |                      |
| CATEGORY  | A                 | B                 | C                     | D                    |
| CIRCLING  | 640-1 621 (700-1) |                   | 640-1 621 (700-1 3/4) | 640-2 621 (700-2)    |

NE-1, 22 OCT 2009 to 19 NOV 2009

|             |         |          |      |
|-------------|---------|----------|------|
| VOR/DME BOS | APP CRS | Rwy Idg  | 9201 |
| 112.7       | 144°    | TDZE     | 17   |
| Chan 74     |         | Apt Elev | 19   |

# VOR/DME RWY 15R

BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

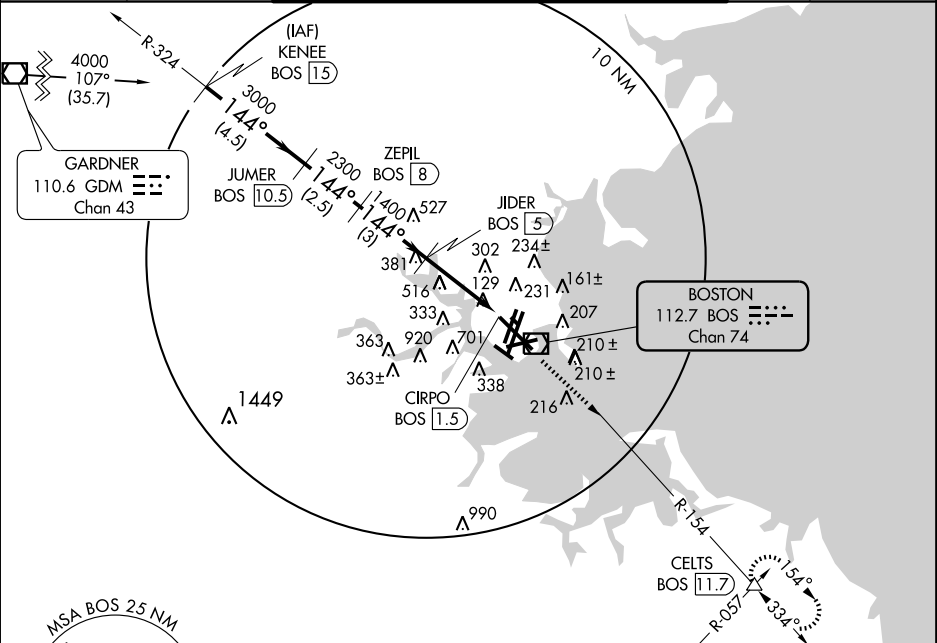
**▼** For inoperative MALSR, increase S-15R Cat A visibility to RVR 5000.

**▲** Cat C and D circling not authorized west of Rwy 4L and 15R.

**MALSR**

**MISSED APPROACH:** Climb to 3000 via BOS R-154 to CELTS Int/BOS 11.7 DME and hold.

|             |                |  |         |              |
|-------------|----------------|--|---------|--------------|
| ATIS        | BOSTON APP CON | BOSTON TOWER                                     | GND CON | CLNC DEL     |
| ARR 135.0   | 120.6 263.1    | Rwys 4R-22L, 9-27 132.225 257.8                  | 121.9   | 121.65 257.8 |
| DEP 127.875 |                | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R 128.8 257.8 |         |              |



Procedure Turn NA

VGSI and descent angles not coincident.

4000 144° 3000 2300 1400 3.53° TCH 60

4.5 NM 2.5 NM 3 NM 1.3 NM 2.2

| CATEGORY | A                  | B                   | C                   | D                   |
|----------|--------------------|---------------------|---------------------|---------------------|
| S-15R    | 780/40 763 (800-¾) |                     | 780-1¾ 763 (800-1¾) | 780-2 763 (800-2)   |
| CIRCLING | 780-1 761 (800-1)  | 780-1¼ 761 (800-1¼) | 780-2¼ 761 (800-2¼) | 780-2½ 761 (800-2½) |

ELEV 19

144° 3.5 NM from FAF

TDZE 17

Obstacles: 66, 129, 302, 62, 331, 32, 4R, 33L, 33R, 22L, 22R, 15L, 15R, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

TDZ/CL Rwys 4R, 15R and 33L  
REIL Rwys 4L, 27, and 32  
MIRL Rwy 15L-33R  
HIRL Rwys 4L-22R, 4R-22L, 14-32, 15R-33L, and 9-27.

|   |                        |   |
|---|------------------------|---|
| VOR/DME BOS<br><b>112.7</b><br>Chan <b>74</b> | APP CRS<br><b>260°</b> | Rwy Idg <b>7000</b><br>TDZE <b>17</b><br>Apt Elev <b>19</b> |
|---|------------------------|---|

BOSTON/GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

VOR/DME RWY 27



Circling not authorized CATs C and D west of Rwy 4L and 15R.

**MISSED APPROACH:** Climbing left turn to 3000 via BOS R-154 to CELTS Int and hold.

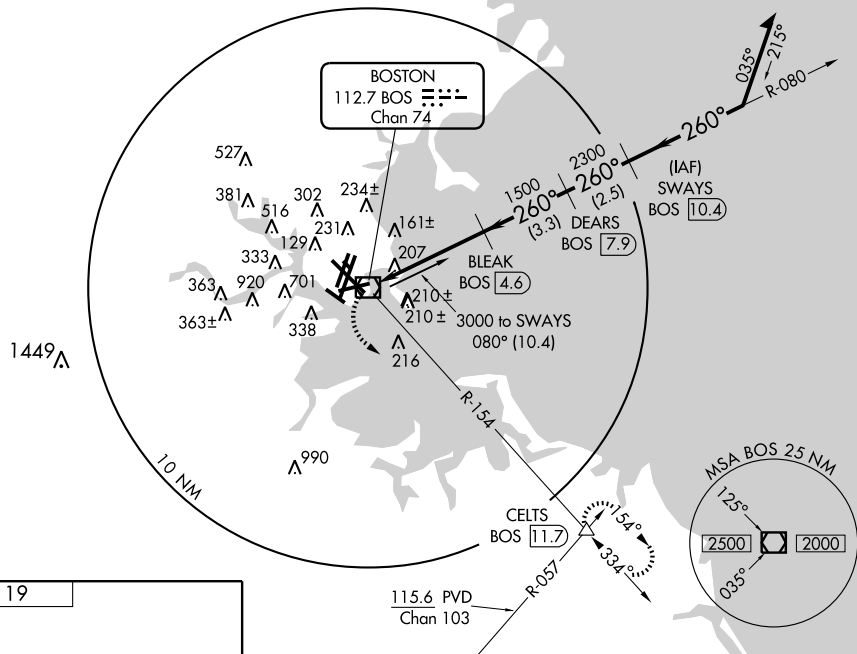
|      |         |                |       |
|------|---------|----------------|-------|
| ATIS |         |                |       |
| ARR  | 135.0   | BOSTON APP CON |       |
| DEP  | 127.875 | 120.6          | 263.1 |

| BOSTON TOWER                            |         |       |
|---|---------|-------|
| Rwys 4R-22L, 9-27                       | 132.225 | 257.8 |
| Rwys 4L-22R, 14-32, 15R-33L,<br>15L-33R | 128.8   | 257.8 |

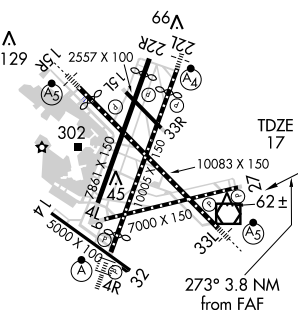
GND CON  
**121.9**

CLNC DEL  
**121.65 257.8**

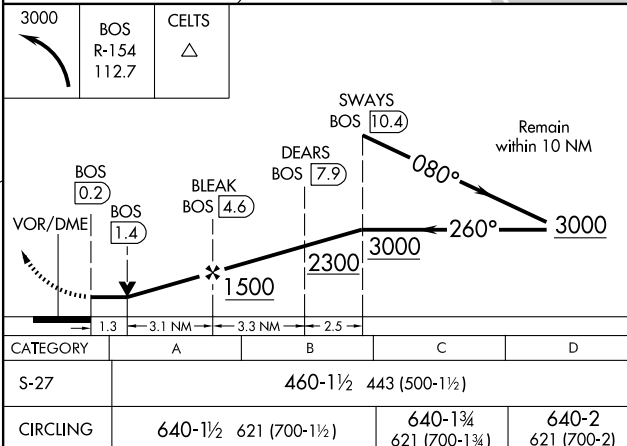
RADAR REQUIRED



ELEV 19



TDZ/CL Rwy 4R, 15R and 33L  
REIL Rwy 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwy 4L-22R, 4R-22L,



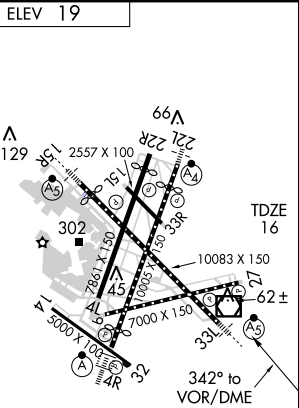
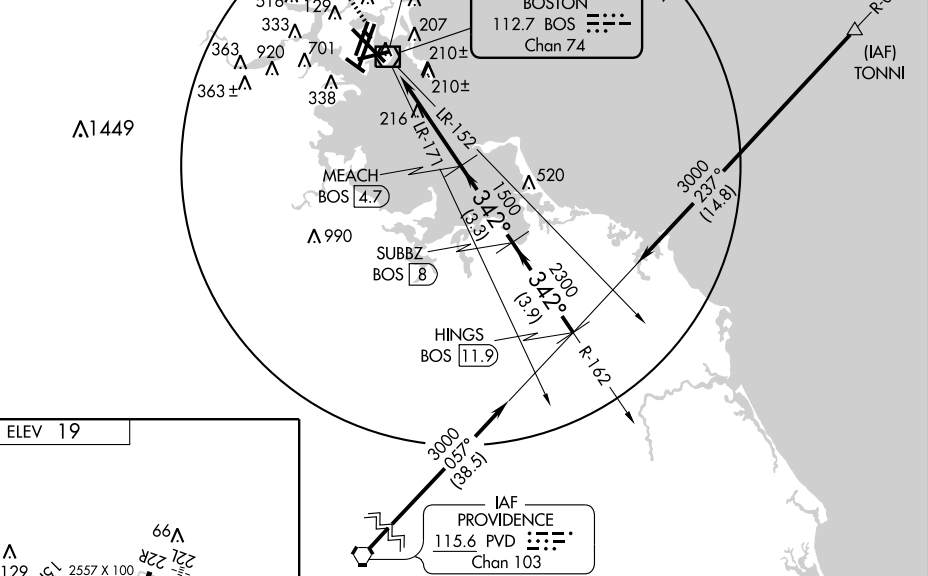
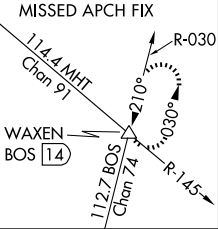
|             |         |          |        |
|-------------|---------|----------|--------|
| VOR/DME BOS | APP CRS | Rwy Idg  | 10,083 |
| 112.7       | 342°    | TDZE     | 16     |
| Chan 74     |         | Apt Elev | 19     |

**⚠** Circling not authorized for CATs C and D west of Rwy 4L and 15R.



**MISSED APPROACH:** Climb to 1500, then climbing right turn to 3000 via BOS R-030 to WAXEN Int/BOS 14 DME and hold.

|             |                |  |         |              |
|-------------|----------------|--|---------|--------------|
| ATIS        | BOSTON APP CON | BOSTON TOWER                                     | GND CON | CLNC DEL     |
| ARR 135.0   | 120.6 263.1    | Rwys 4R-22L, 9-27 132.225 257.8                  | 121.9   | 121.65 257.8 |
| DEP 127.875 |                | Rwys 4L-22R, 14-32, 15R-33L, 15L-33R 128.8 257.8 |         |              |



TDZ/CL Rwys 4R, 15R and 33L  
REIL Rwys 4L, 27 and 32  
MIRL Rwy 15L-33R  
HIRL Rwys 4L-22R, 4R-22L, 14-32, 15R-33L and 9-27

|          |        |             |                        |                       |             |                   |
|----------|--------|-------------|------------------------|-----------------------|-------------|-------------------|
|          | 1500   | 3000        | BOS R-030 112.7        | WAXEN △               | SUBBZ BOS 8 | HINGS BOS 11.9    |
|          |        |             | VOR/DME BOS 1.2        | MEACH BOS 4.7         |             | 3000              |
|          |        |             |                        |                       |             | Procedure Turn NA |
|          |        |             |                        |                       |             |                   |
| CATEGORY | A      | B           | C                      | D                     |             |                   |
| S-33L    | 480/24 | 464 (500-½) | 480/40<br>464 (500-¾)  | 480/50<br>464 (500-1) |             |                   |
| CIRCLING | 640-1  | 621 (700-1) | 640-1¾<br>621 (700-1¾) | 640-2<br>621 (700-2)  |             |                   |

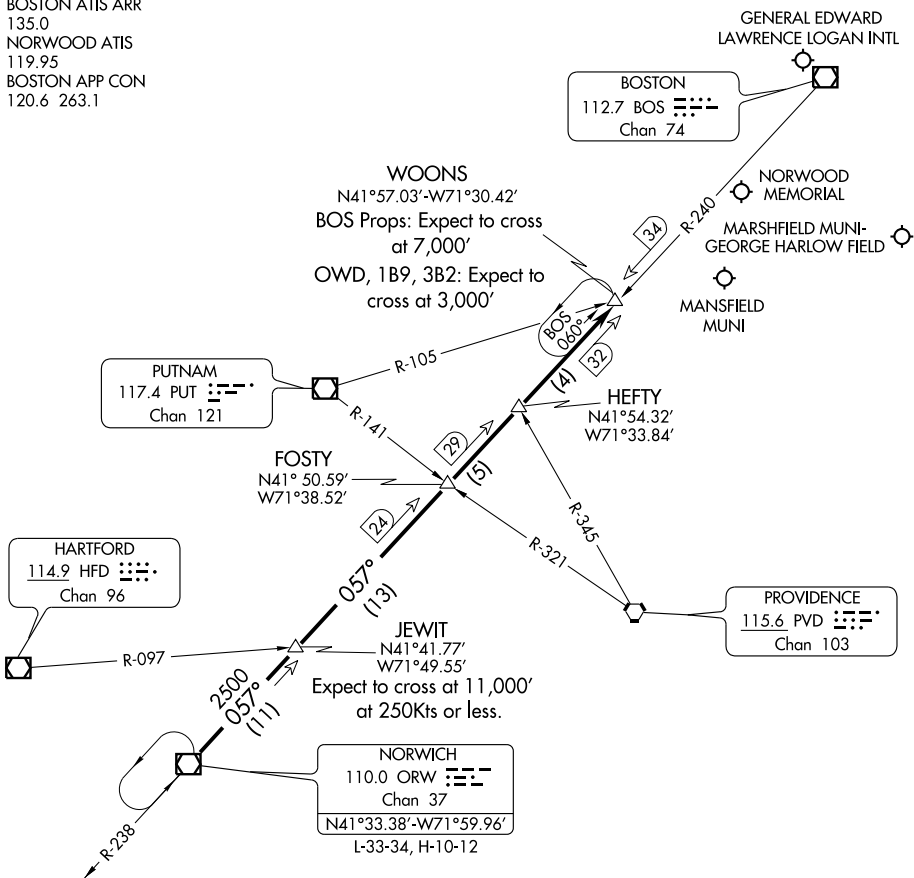
NE-1, 22 OCT 2009 to 19 NOV 2009

## WOONS ONE ARRIVAL

ST-58 (FAA)

BOSTON, MASSACHUSETTS

BOSTON ATIS ARR  
135.0  
NORWOOD ATIS  
119.95  
BOSTON APP CON  
120.6 263.1



NOTE: Chart not to scale

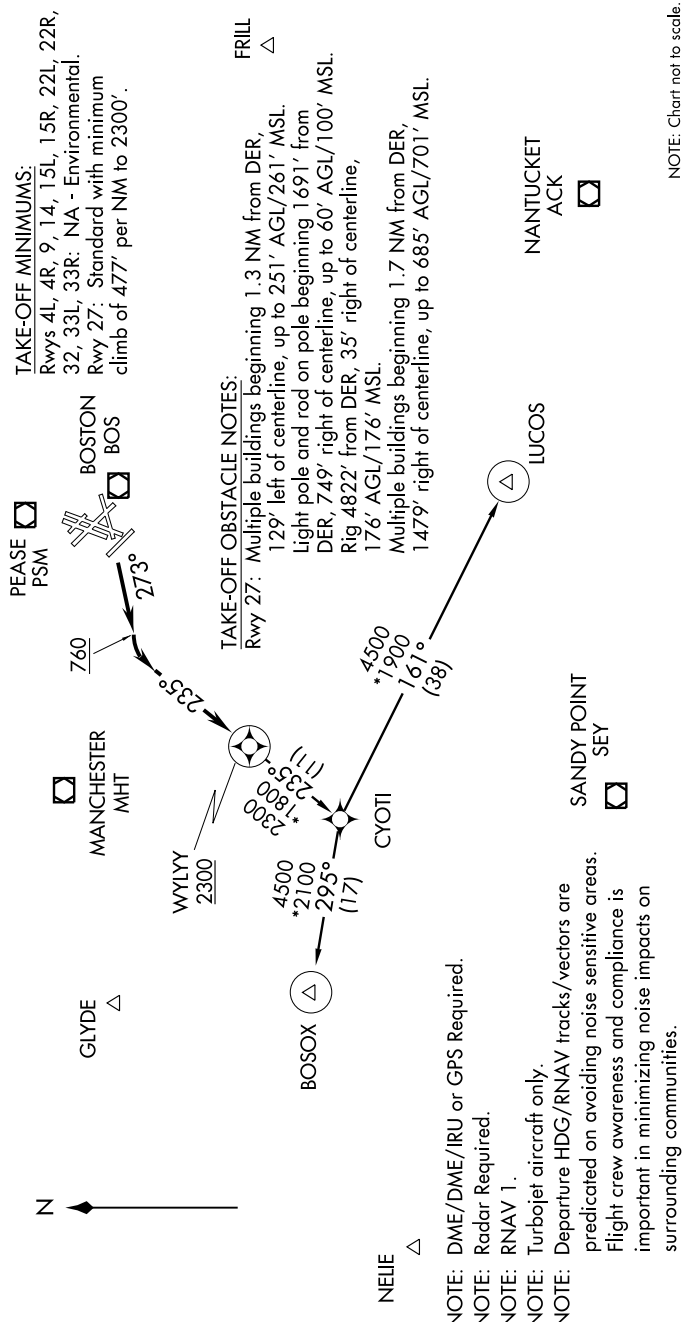
NOTE: Applicable to props landing BOS and all aircraft landing OWD, 1B9 and GHG.  
Applicable 11,000 feet and above.

From over ORW VOR/DME via ORW R-057 to WOONS INT. Expect radar vectors to final.

ATIS DEP 127.875  
CINC DEL  
121.65 257.8  
GND CON  
121.9  
BOSTON TOWER  
132.225 128.8 257.8  
BOSTON DEP CON  
133.0 343.6

DEPARTURE ROUTE DESCRIPTION

**TAKE-OFF RUNWAY 27:** Climb heading 273° to 760 MSL, then climbing left turn on 235° course to WYLYY, thence....  
....via depicted route. Cross WYLYY at or above 2300'. Maintain 5000' or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.  
**BOSOX TRANSITION (WYLYY7.BOSOX):**  
**LUCOS TRANSITION (WYLYY7.LUCOS):**



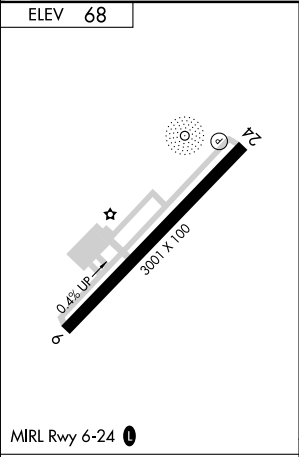
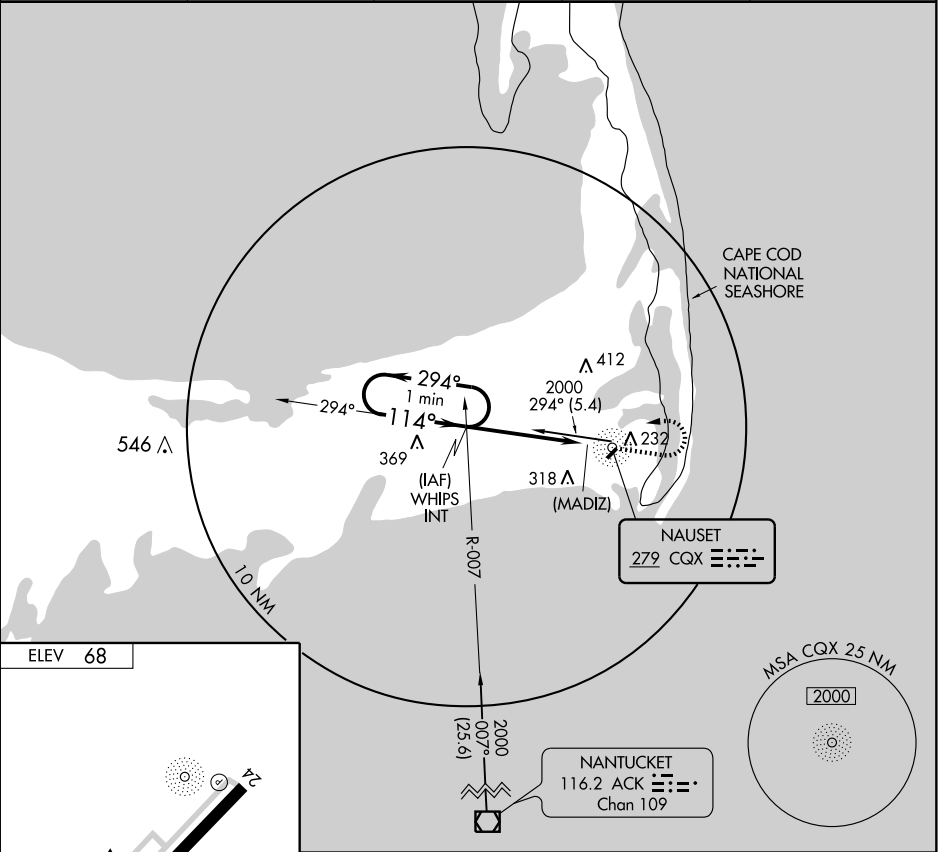
NDB or GPS-A  
CHATHAM MUNI (CQX)

|         |         |              |     |
|---------|---------|--------------|-----|
| NDB CQX | APP CRS | Rwy Idg TDZE | N/A |
| 279     | 114°    | Apt Elev     | 68  |

▼ If local altimeter setting not received, use Hyannis altimeter setting and increase all MDA's 40 feet.

MISSED APPROACH: Climb to 800 then climbing left turn to 2000 to WHIPS Int/CQX 294° bearing/ACK R-007 and hold.

|                 |                         |                   |                        |          |
|-----------------|-------------------------|-------------------|------------------------|----------|
| ASOS<br>135,875 | CAPE APP CON ★<br>118.2 | CLNC DEL<br>127.3 | UNICOM<br>122.8 (CTAF) | 122.95 0 |
|-----------------|-------------------------|-------------------|------------------------|----------|



0.4% UP  
3001 X 100

MIRL Rwy 6-24 **U**

| FAF to MAP 4.1 NM |      |      |      |      |      |
|-------------------|------|------|------|------|------|
| Knots             | 60   | 90   | 120  | 150  | 180  |
| Min:Sec           | 4:06 | 2:44 | 2:03 | 1:38 | 1:22 |

One Minute Holding Pattern

WHIPS INT

2000

294°

114°

114°

(MADIZ)

NDB

4.1 NM

1.3 NM

| CATEGORY | A      | B            | C                      | D                    |
|----------|--------|--------------|------------------------|----------------------|
| CIRCLING | 580-1½ | 512 (600-1½) | 660-1½<br>592 (600-1½) | 660-2<br>592 (600-2) |

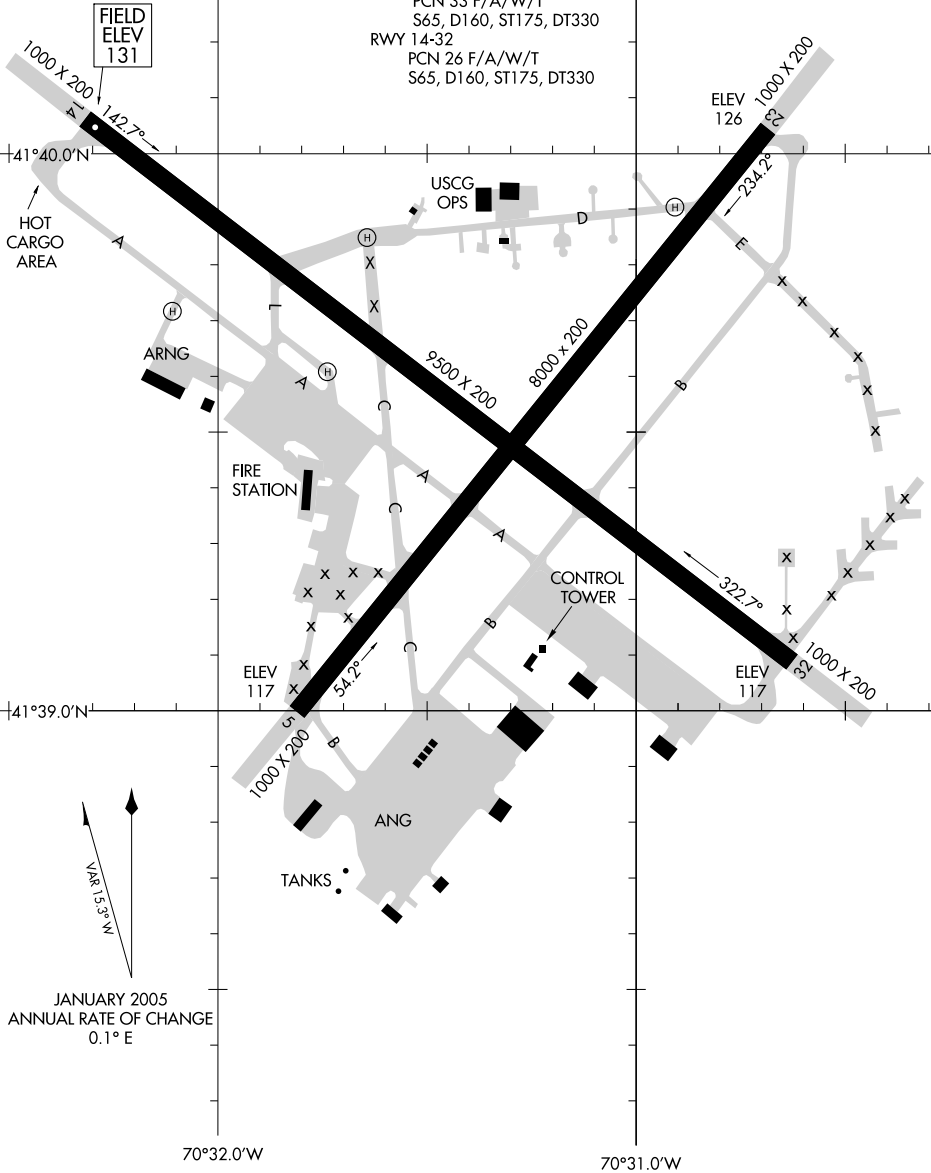
# AIRPORT DIAGRAM

FALMOUTH/CAPE COD COAST GUARD AIR STATION (F'MH)  
AL-10362 (FAA) FALMOUTH, MASSACHUSETTS

ATIS ★  
120.475 236.825  
COAST GUARD TOWER  
121.0 291.1  
GND CON  
124.15 275.8

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

RWY 5-23  
PCN 33 F/A/W/T  
S65, D160, ST175, DT330  
RWY 14-32  
PCN 26 F/A/W/T  
S65, D160, ST175, DT330



NE-1, 22 OCT 2009 to 19 NOV 2009



|                                  |                        |                             |   |
|----------------------------------|------------------------|-----------------------------|---|
| LOC I-FMH<br><b><u>110.1</u></b> | APP CRS<br><b>234°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>8000</b><br><b>125</b><br><b>130</b> |
|----------------------------------|------------------------|-----------------------------|---|

## COPTER ILS or LOC/DME RWY 23

FALMOUTH/ CAPE COD COAST GUARD AIR STATION (FMH)

**A** NA TACAN required. United States Coast Guard use only.  
For inoperative ALSF-1, increase S-ILS-23 and S-LOC 23  
visibility to RVR 2400. DME from FMH TACAN.  
Simultaneous reception of I-FMH and FMH DME required.

ALSF-1



**MISSED APPROACH:** Climb to 1 600 via FMH R-240 to WARIP/FMH 7 DME/RADAR and hold.

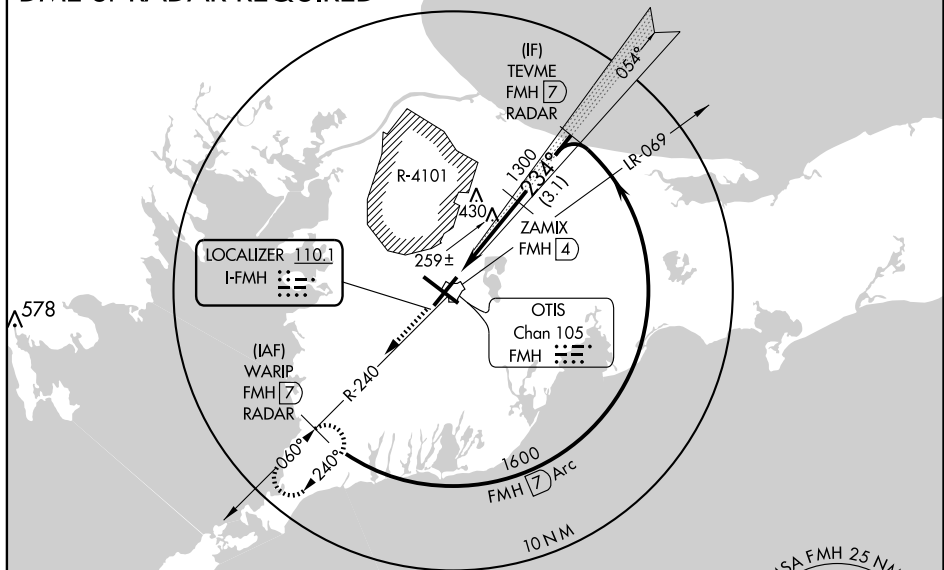
ATIS ★  
120.475 236.825

CAPE APP CON  
118.2 284.6

COAST GUARD TOWER  
**121.0 291.1**

GND CON  
124.15 275.8

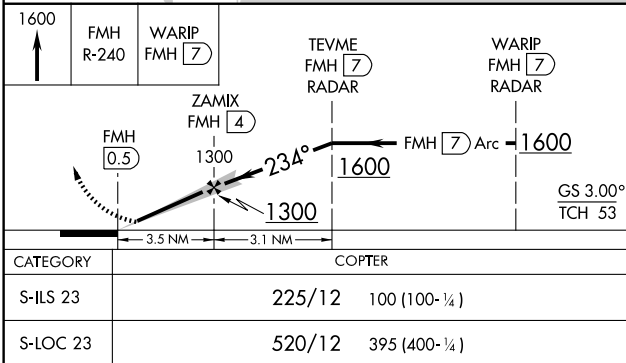
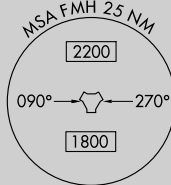
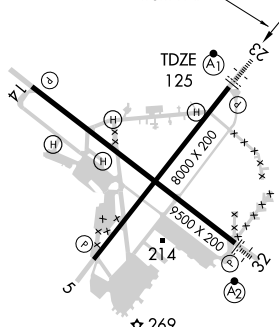
DME or RADAR REQUIRED



NE-1. 22 OCT 2009 to 19 NOV 2009

ELEV 130

234° 3.5 NM  
from FAF \

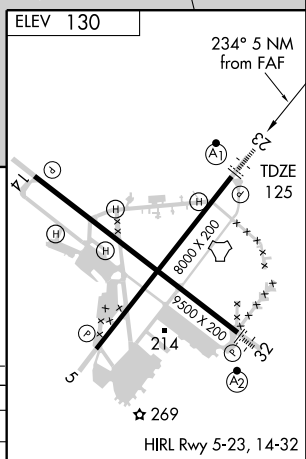


HIRL Rwy 5-23, 14-32

FALMOUTH/ CAPE COD COAST GUARD AIR STATION (FMH)

|                 |              |                   |              |
|-----------------|--------------|-------------------|--------------|
| ATIS ★          | CAPE APP CON | COAST GUARD TOWER | GND CON      |
| 120.475 236.825 | 118.2 284.6  | 121.0 291.1       | 124.15 275.8 |

NE-1 22 OCT 2009 to 19 NOV 2009



| FAF to MAP 4.4 NM |      |      |      |      |      |
|-------------------|------|------|------|------|------|
| Knots             | 60   | 90   | 120  | 150  | 180  |
| Min:Sec           | 4:24 | 2:56 | 2:12 | 1:46 | 1:28 |

|           |         |          |      |
|-----------|---------|----------|------|
| LOC I-BNX | APP CRS | Rwy Idg  | 9500 |
| 109.9     | 322°    | TDZE     | 117  |
|           |         | Apt Elev | 130  |

ILS or LOC RWY 32

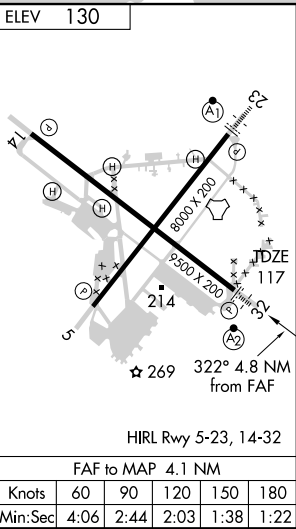
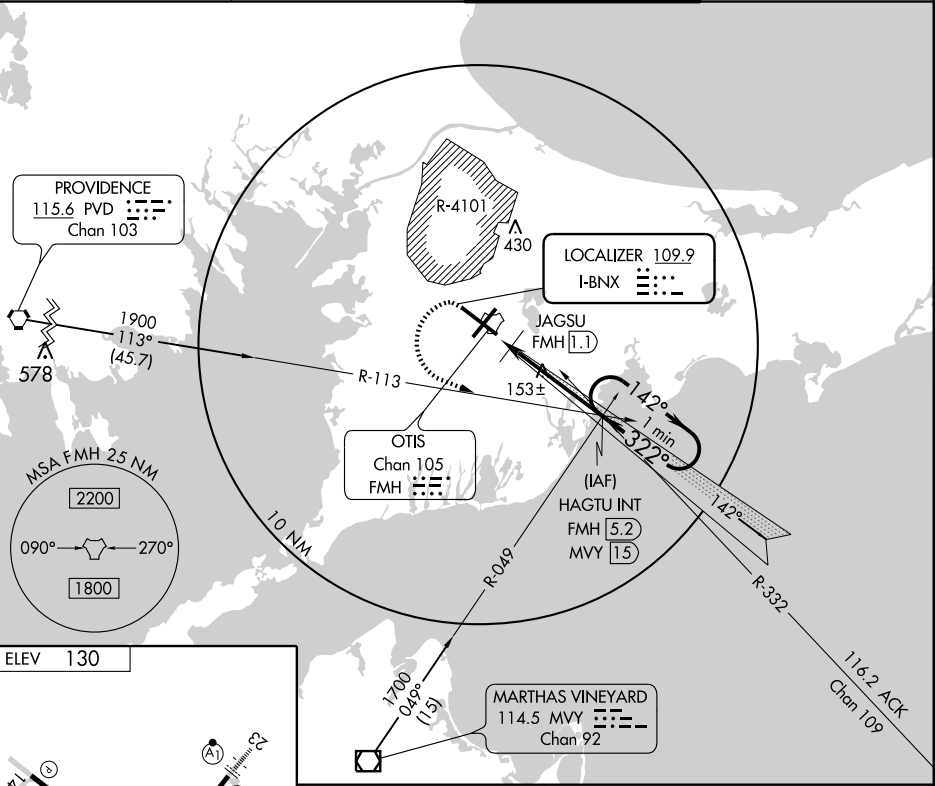
FALMOUTH/ CAPE COD COAST GUARD AIR STATION (FMH)

Inoperative table does not apply to S-LOC 32 Cat C.  
Circling NA NE of Rwy 14 and NW of Rwy 23.

SALSF  
A2

MISSED APPROACH: Climb to 1400 then climbing left turn to 2000 via heading 112° and I-BNX SE course to HAGTU INT/FMH 5.2 DME and hold.

|                           |                             |                                  |                         |
|---------------------------|-----------------------------|----------------------------------|-------------------------|
| ATIS ★<br>120.475 236.825 | CAPE APP CON<br>118.2 284.6 | COAST GUARD TOWER<br>121.0 291.1 | GND CON<br>124.15 275.8 |
|---------------------------|-----------------------------|----------------------------------|-------------------------|



|   |  |   |   |  |
|---|--|---|---|--|
| 1400                                      | 2000   | HAGTU INT<br>FMH 5.2                    | One Minute<br>Holding Pattern   |  |
| ↑   | 112° &<br>LOC<br>SE course   |   |   |  |
| VGSI and ILS glidepath<br>not coincident. | JAGSU<br>FMH 1.1   | HAGTU INT<br>FMH 5.2                    | 1700  | 1700                                     |
|   | 0.7  | 4.1 NM                                  | 142° →  | ← 322°                                   |
|   |  |   | 1700  | GS 3.00°<br>TCH 50                       |
| CATEGORY                                  | A  | B                                       | C   | D  |
| S-ILS 32                                  | 317- <sup>3</sup> / <sub>4</sub> 200 (200- <sup>3</sup> / <sub>4</sub> ) |   |   |  |
| S-LOC 32                                  | 540- <sup>3</sup> / <sub>4</sub>   | 423 (500- <sup>3</sup> / <sub>4</sub> ) | 540-1 <sup>1</sup> / <sub>4</sub>   | 423 (500-1 <sup>1</sup> / <sub>4</sub> ) |
| CIRCLING                                  | 580-1  | 450 (500-1)                             | 580-1 <sup>1</sup> / <sub>2</sub><br>450 (500-1 <sup>1</sup> / <sub>2</sub> ) | 680-2<br>550 (600-2)                     |

NDB RWY 23

|            |             |          |            |
|------------|-------------|----------|------------|
| NDB FM     | APP CRS     | Rwy Idg  | 8000       |
| <u>362</u> | <u>234°</u> | TDZE     | <u>125</u> |
|            |             | Apt Elev | <u>130</u> |

FALMOUTH/ CAPE COD COAST GUARD AIR STATION (F'MH)

Circling NA NE of Rwy 14 and NW of Rwy 23.

ALSF-1



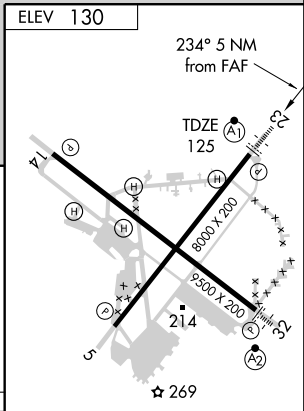
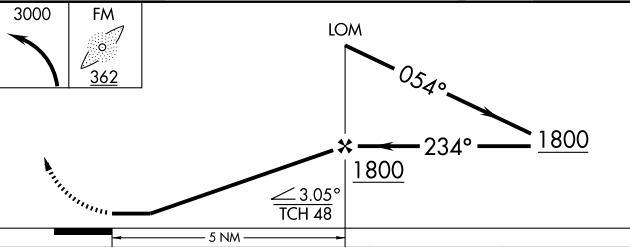
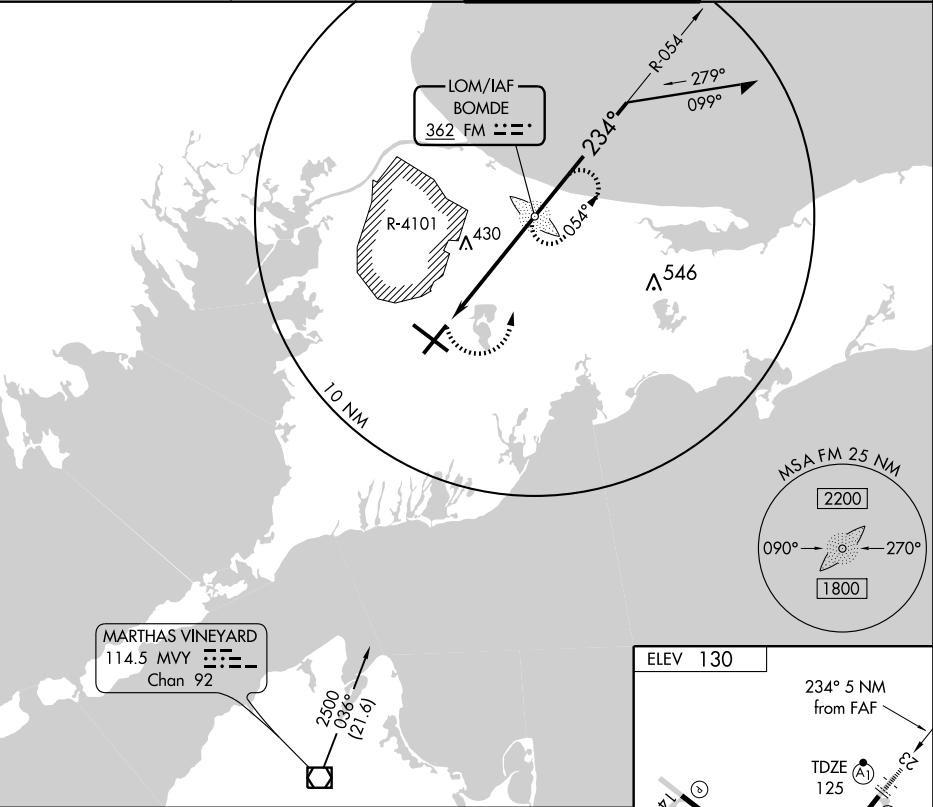
MISSED APPROACH: Climbing left turn to 3000 direct FM LOM and hold.

ATIS ★  
120.475 236.825

CAPE APP CON  
118.2 284.6

COAST GUARD TOWER  
121.0 291.1

GND CON  
124.15 275.8



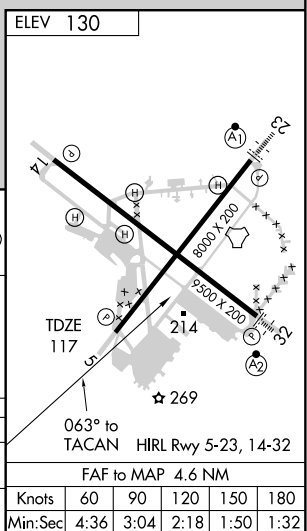
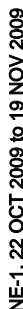
| CATEGORY | A      | B           | C                      | D                        |
|----------|--------|-------------|------------------------|--------------------------|
| S-23     | 780/40 | 655 (700-¾) | 780/60<br>655 (700-1¼) | 780 - 1¾<br>655 (700-1¾) |
| CIRCLING | 780-1  | 650 (700-1) | 780-1¾<br>650 (700-1¾) | 780-2<br>650 (700-2)     |

|                 |      |      |      |      |      |
|-----------------|------|------|------|------|------|
| FAF to MAP 5 NM |      |      |      |      |      |
| Knots           | 60   | 90   | 120  | 150  | 180  |
| Min:Sec         | 5:01 | 3:21 | 2:31 | 2:00 | 1:40 |

FALMOUTH/ CAPE COD COAST GUARD AIR STATION (FMH)

**MISSED APPROACH:** Climb to 1400 then climbing left turn to 3000 via FMH TACAN R-045 to CISCO/12 DME and hold.

GND CON  
124.15 275.8

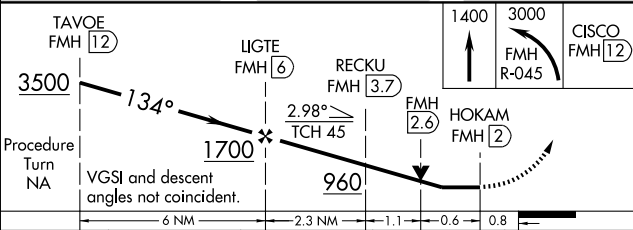
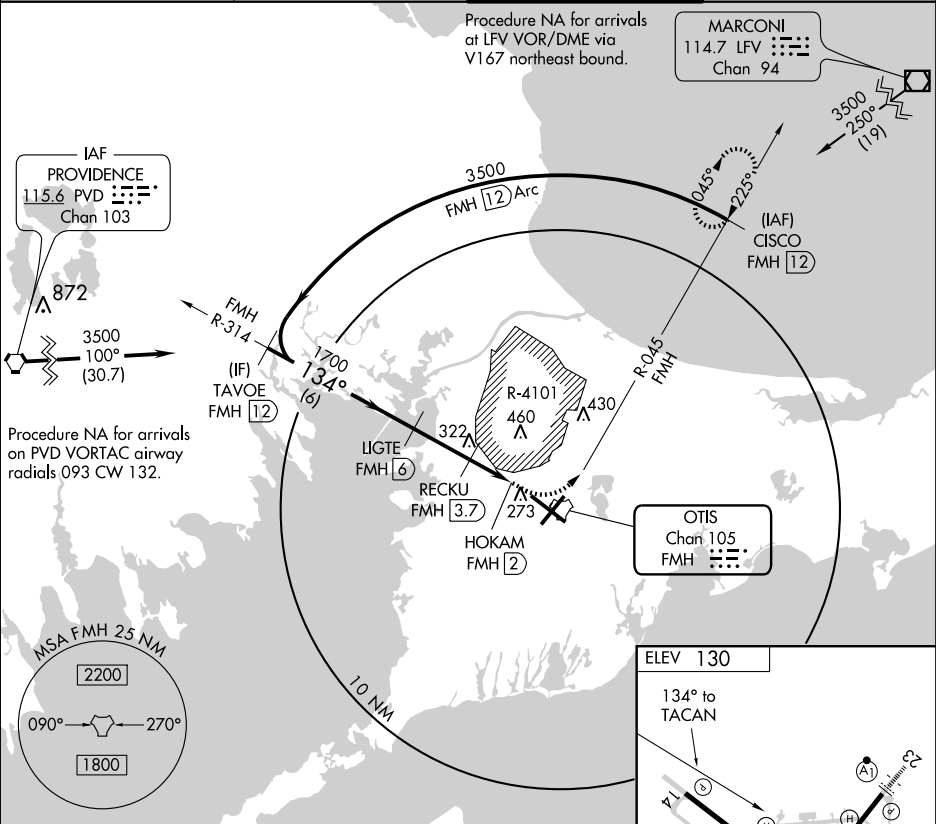


TACAN RWY 14

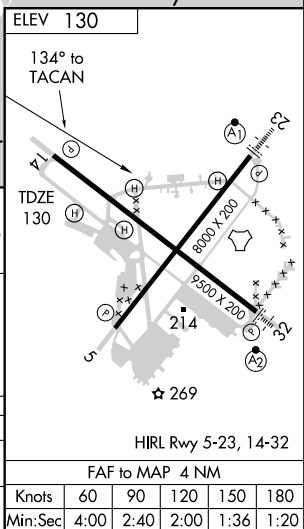
|           |         |          |      |
|-----------|---------|----------|------|
| TACAN FMH | APP CRS | Rwy Idg  | 9500 |
| Chan 105  | 134°    | TDZE     | 130  |
|           |         | Apt Elev | 130  |

FALMOUTH/ CAPE COD COAST GUARD AIR STATION (FMH)

|  |                             |  |                         |
|--|-----------------------------|--|-------------------------|
| Circling NA NE of Rwy 14 and NW of Rwy 23. |                             | MISSED APPROACH: Climb to 1400 then climbing left turn to 3000 via FMH TACAN R-045 to CISCO/12 DME and hold. |                         |
| ATIS ★<br>120.475 236.825                  | CAPE APP CON<br>118.2 284.6 | COAST GUARD TOWER<br>121.0 291.1   | GND CON<br>124.15 275.8 |



| CATEGORY | A                 | B                         | C                 | D |
|----------|-------------------|---------------------------|-------------------|---|
| S-14     | 540-1 410 (500-1) | 540-1 410 (500-1 1/4)     |                   |   |
| CIRCLING | 580-1 450 (500-1) | 580-1 1/2 450 (500-1 1/2) | 680-2 550 (600-2) |   |



NE-1, 22 OCT 2009 to 19 NOV 2009

|                 |             |          |             |
|-----------------|-------------|----------|-------------|
| TACAN FMH       | APP CRS     | Rwy Idg  | <b>8000</b> |
| Chan <b>105</b> | <b>222°</b> | TDZE     | <b>125</b>  |
|                 |             | Apt Elev | <b>130</b>  |

TACAN RWY 23  
FALMOUTH/ CAPE COD COAST GUARD AIR STATION (FMH)

Circling NA NE of Rwy 14 and NW of Rwy 23.

ALSF-1



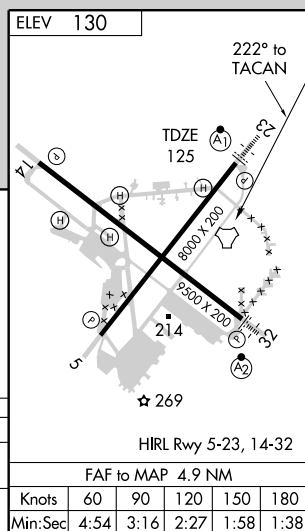
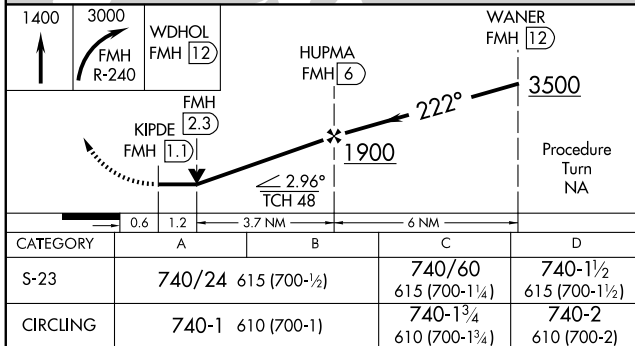
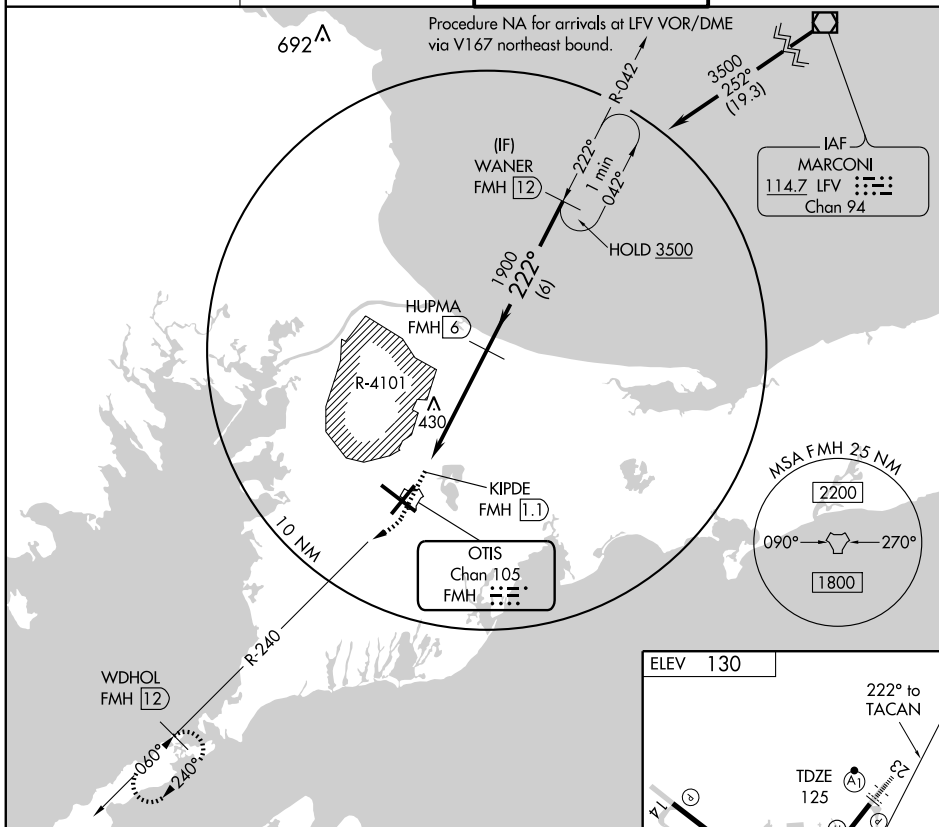
**MISSED APPROACH:** Climb to 1400 then climbing right turn to 3000 via FMH TACAN R-240 to WDHOL/FHM 12 DME and hold.

ATIS ★  
120.475 236.825

CAPE APP CON  
118.2 284.6

COAST GUARD TOWER  
**121.0 291.1**

GND CON  
124.15 275.8



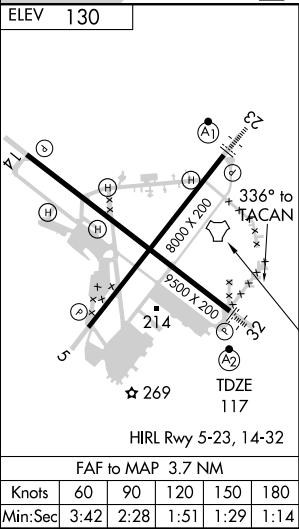
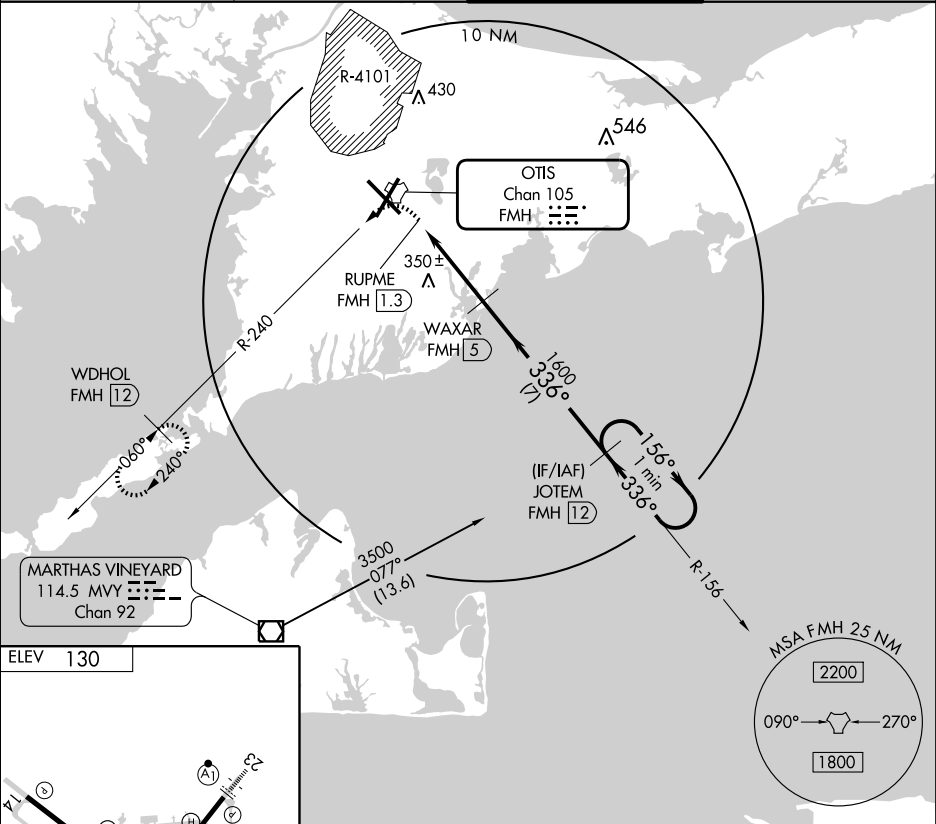
TACAN RWY 32

|           |         |          |      |
|-----------|---------|----------|------|
| TACAN FMH | APP CRS | Rwy Idg  | 9500 |
| Chan 105  | 336°    | TDZE     | 117  |
|           |         | Apt Elev | 130  |

FALMOUTH/ CAPE COD COAST GUARD AIR STATION (FMH)

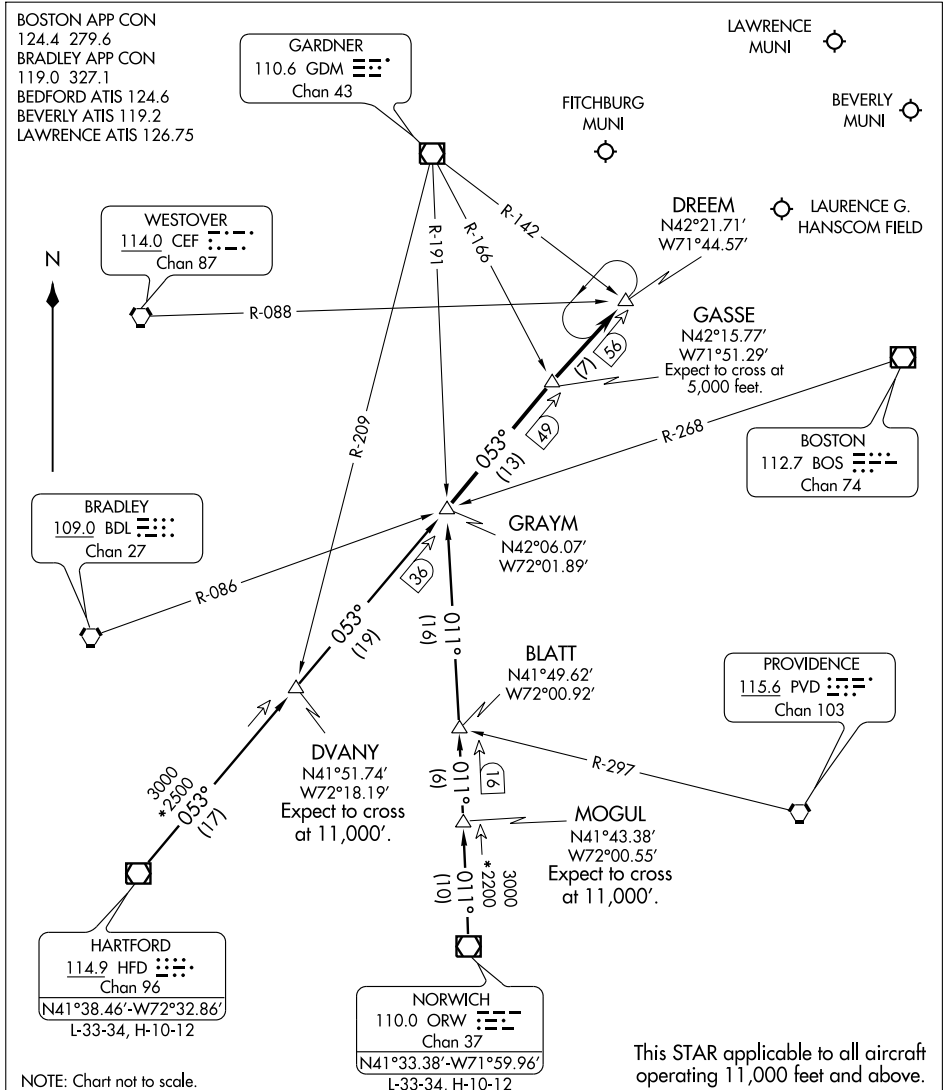
|  |           |  |
|--|-----------|--|
| Inoperative table does not apply to Cat C.<br>Circling NA NE of Rwy 14 and NW of Rwy 23. | SALSF<br> | MISSED APPROACH: Climb to 1400 then climbing left turn to 3000 via FMH R-240 to WDHOL/12 DME and hold. |
|--|-----------|--|

|                           |                             |                                  |                         |
|---------------------------|-----------------------------|----------------------------------|-------------------------|
| ATIS ★<br>120.475 236.825 | CAPE APP CON<br>118.2 284.6 | COAST GUARD TOWER<br>121.0 291.1 | GND CON<br>124.15 275.8 |
|---------------------------|-----------------------------|----------------------------------|-------------------------|



|               |         |               |                 |                            |
|---------------|---------|---------------|-----------------|----------------------------|
| 1400          | 3000    | WDHOL FMH 12  | JOTEM FMH 12    | One Minute Holding Pattern |
| FMH R-240     | FMH 1.9 | WAXAR FMH 5   |                 |                            |
| RUPME FMH 1.3 | 3.00°   | TCH 45        | 1600            |                            |
| 0.8           | 0.7     | 3 NM          | 7 NM            |                            |
| CATEGORY      | A       | B             | C               | D                          |
| S-32          | 620-3/4 | 503 (500-3/4) | 620-1 1/2       | 503 (500-1 1/2)            |
| CIRCLING      | 620-1   | 490 (500-1)   | 620-1 1/2       | 680-2                      |
|               |         |               | 490 (500-1 1/2) | 550 (600-2)                |





**HARTFORD TRANSITION (HFD.GRAYM2):** From over HFD VOR/DME via HFD R-053 to GRAYM INT. Thence. . .

**NORWICH TRANSITION (ORW.GRAYM2):** From over ORW VOR/DME via ORW R-011 to GRAYM INT. Thence. . .

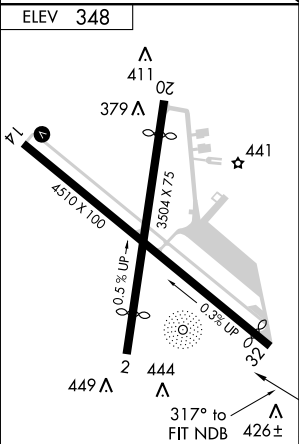
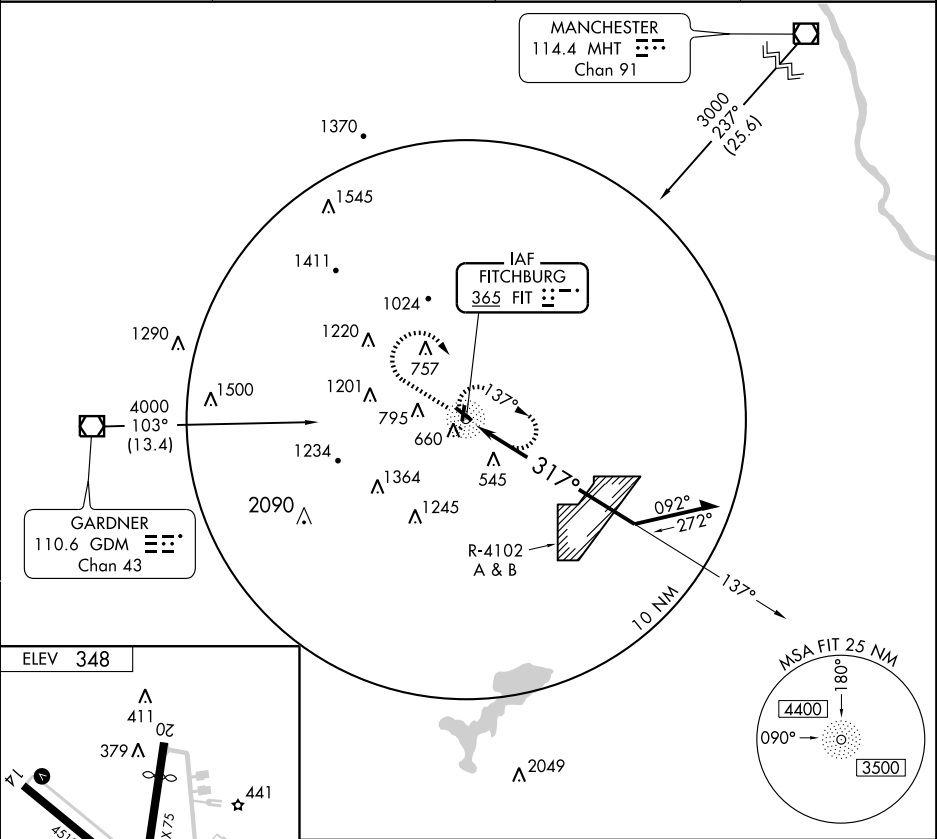
. . . From over GRAYM INT via HFD VOR/DME R-053 to DROOM INT, then direct destination airport. Expect radar vectors to final approach course.

|         |         |              |     |
|---------|---------|--------------|-----|
| NDB FIT | APP CRS | Rwy Idg TDZE | N/A |
| 365     | 317°    | Apt Elev     | 348 |

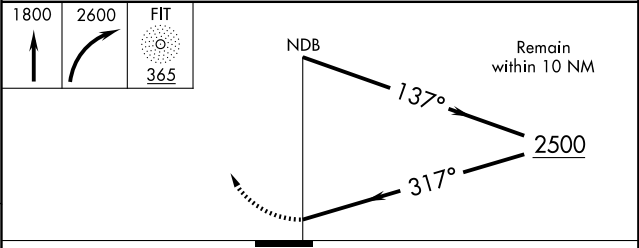
NDB-A  
FITCHBURG MUNI (FIT)

MISSED APPROACH: Climb to 1800, then climbing right turn to 2600 direct FIT NDB and hold.

|                 |                               |                        |       |
|-----------------|-------------------------------|------------------------|-------|
| ASOS<br>135.175 | BOSTON APP CON<br>124.4 279.6 | UNICOM<br>122.7 (CTAF) | 123.0 |
|-----------------|-------------------------------|------------------------|-------|



REIL Rwy 32  
MIRL Rwy 14-32



| CATEGORY | A                     | B                        | C                      | D  |
|----------|-----------------------|--------------------------|------------------------|----|
| CIRCLING | 1180-1<br>832 (900-1) | 1320-1½<br>972 (1000-1½) | 1340-3<br>992 (1000-3) | NA |

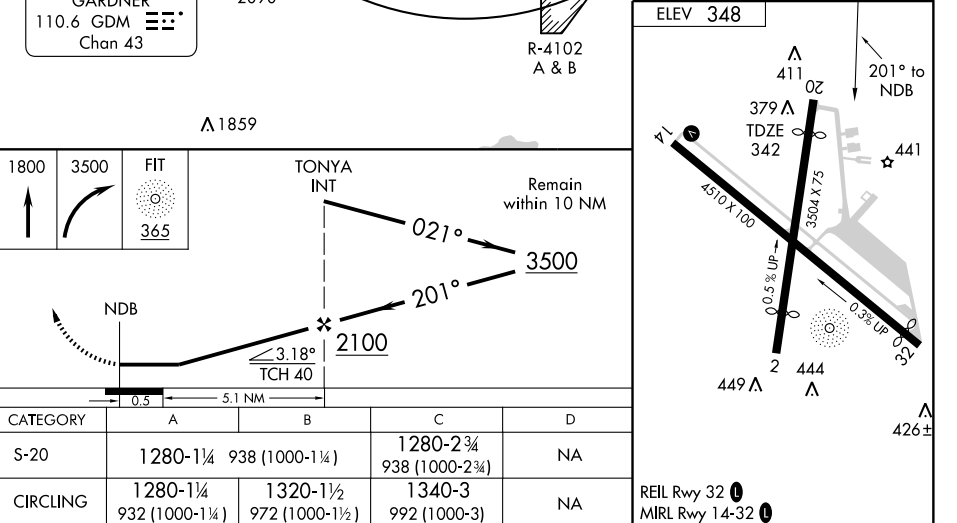
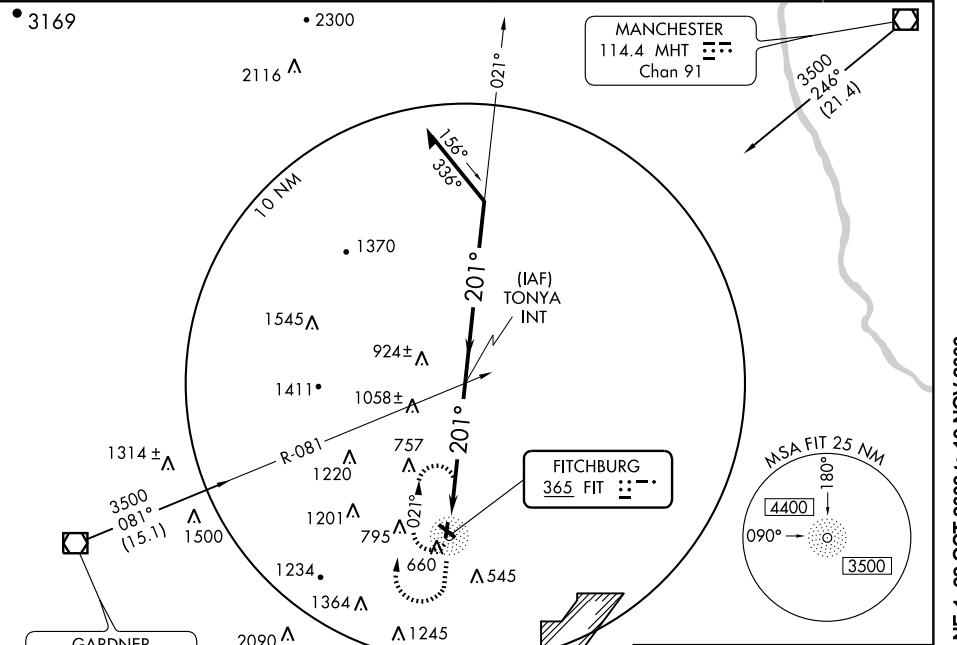
▼

▲

Straight-in minimums NA at night.

MISSED APPROACH: Climb to 1800, then climbing right turn to 3500 direct FIT NDB and hold.

|                 |                               |                        |                |
|-----------------|-------------------------------|------------------------|----------------|
| ASOS<br>135.175 | BOSTON APP CON<br>124.4 279.6 | UNICOM<br>122.7 (CTAF) | 123.0 <b>0</b> |
|-----------------|-------------------------------|------------------------|----------------|



NE-1: 22 OCT 2009 to 19 NOV 2009

|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 4510 |
| 158°    | TDZE     | 340  |
|         | Apt Elev | 348  |

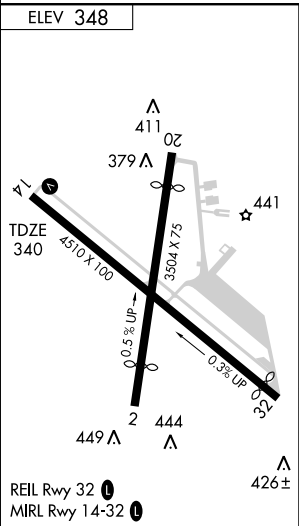
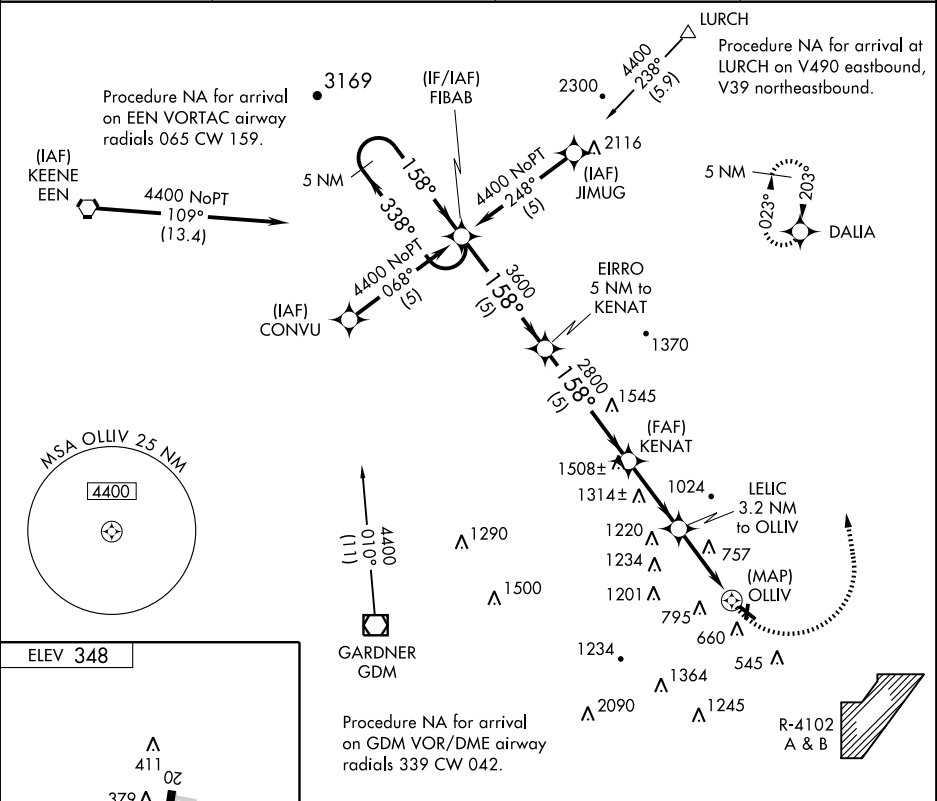
AL-747 (FAA)

# RNAV (GPS) RWY 14

FITCHBURG MUNI (FIT)

|  |                     |  |
|--|---------------------|--|
|  | DME/DME RNP-0.3 NA. | MISSED APPROACH: Climbing left turn to 3500 direct DALIA and hold. |
|--|---------------------|--|

|                 |                               |                        |       |
|-----------------|-------------------------------|------------------------|-------|
| ASOS<br>135.175 | BOSTON APP CON<br>124.4 279.6 | UNICOM<br>122.7 (CTAF) | 123.0 |
|-----------------|-------------------------------|------------------------|-------|



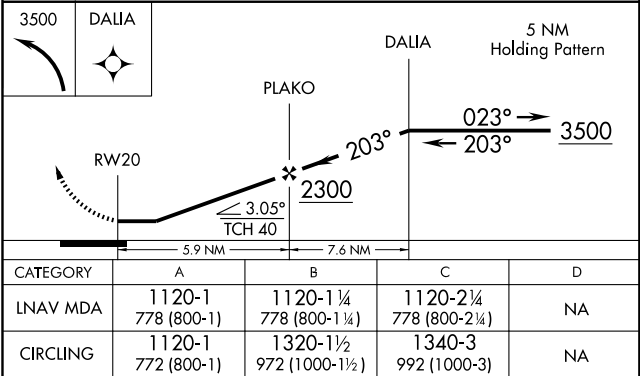
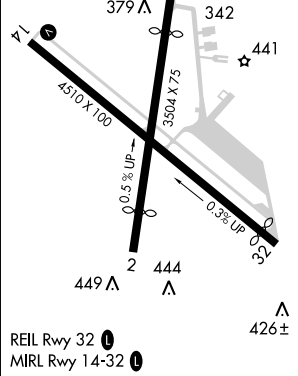
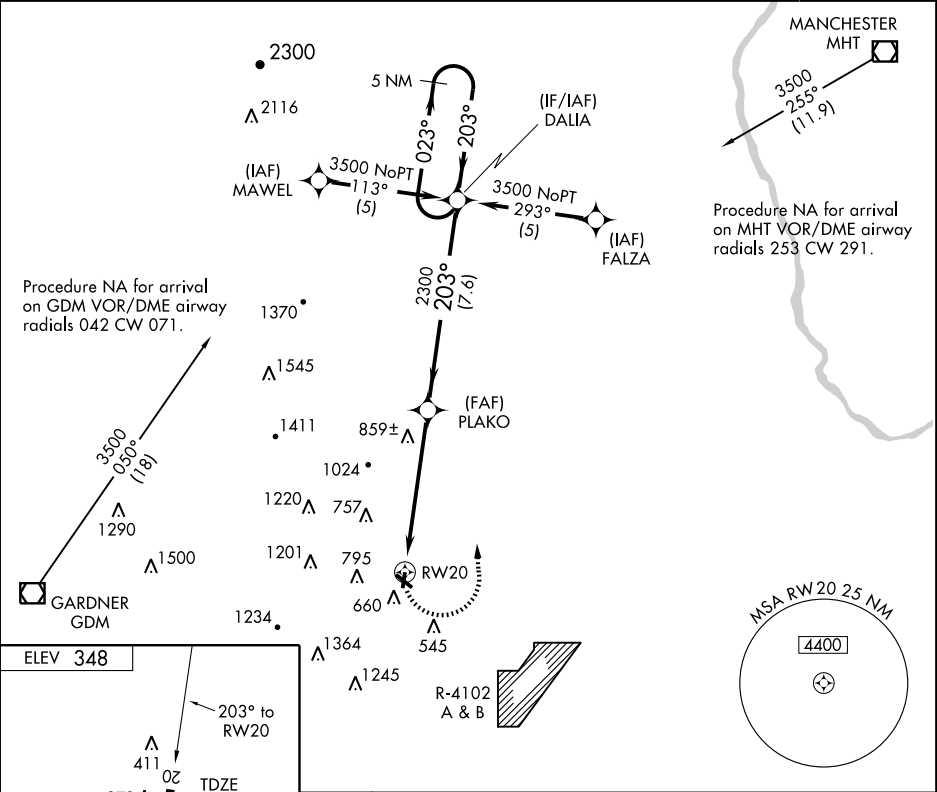
|   |                          |                          |                        |                       |       |
|---|--------------------------|--------------------------|------------------------|-----------------------|-------|
| 5 NM Holding Pattern                    |                          | EIRRO 5 NM to KENAT      |                        | 3500                  | DALIA |
| 4400 ← 338°                             |                          | → 158°                   |                        | KENAT                 |       |
| VGSI and descent angles not coincident. |                          | 3600                     |                        | LELIC 3.2 NM to OLLIV |       |
|   |                          | 2800                     |                        | OLLIV                 |       |
|   |                          | 3.50° TCH 40             |                        | 1660                  |       |
|   |                          | 5 NM                     |                        | 3 NM                  |       |
|   |                          | 3.2                      |                        | 0.3                   |       |
| CATEGORY                                | A                        | B                        | C                      | D                     |       |
| LNAV MDA                                | 1320-1¼<br>980 (1000-1¼) | 1320-1½<br>980 (1000-1½) | 1320-3<br>980 (1000-3) | NA                    |       |
| CIRCLING                                | 1320-1¼<br>972 (1000-1¼) | 1320-1½<br>972 (1000-1½) | 1340-3<br>992 (1000-3) | NA                    |       |

|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 3043 |
| 203°    | TDZE     | 342  |
|         | Apt Elev | 348  |

RNAV (GPS) RWY 20  
FITCHBURG MUNI (FIT)

|   |  |   |
|---|--|---|
|  | Straight-in minimums NA at night.<br>DME/DME RNP-0.3 NA. | MISSED APPROACH: Climbing left<br>turn to 3500 direct DALIA and hold. |
|---|--|---|

|                 |                               |                        |       |
|-----------------|-------------------------------|------------------------|-------|
| ASOS<br>135.175 | BOSTON APP CON<br>124.4 279.6 | UNICOM<br>122.7 (CTAF) | 123.0 |
|-----------------|-------------------------------|------------------------|-------|





|   |                        |                             |  |
|---|------------------------|-----------------------------|--|
| VOR/DME GDM<br><b>110.6</b><br>Chan <b>43</b> | APP CRS<br><b>097°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>N/A</b><br><b>N/A</b><br><b>955</b> |
|---|------------------------|-----------------------------|--|

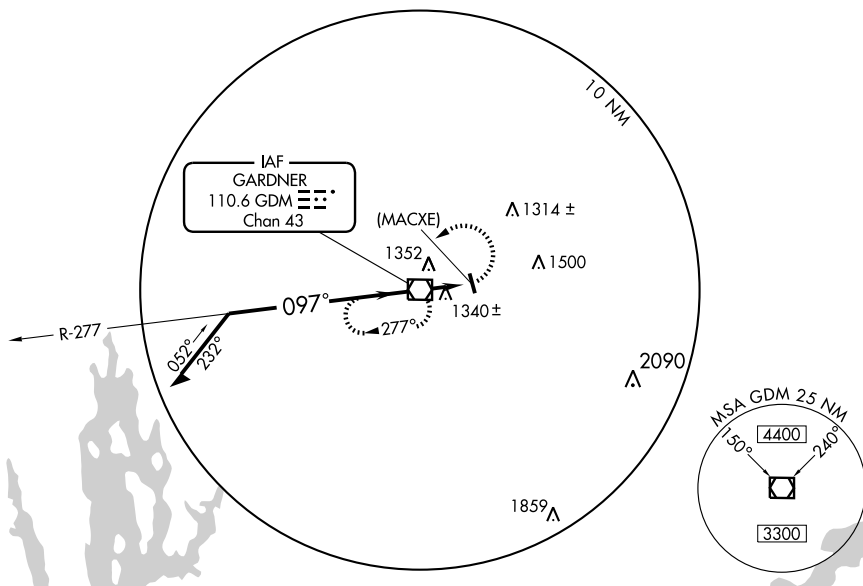
VOR or GPS-A  
GARDNER MUNI (GDM)

|             |  |
|-------------|--|
| <b>T</b>    | Use Worcester altimeter setting; when not recieved |
| <b>A NA</b> | procedure not authorized.                          |

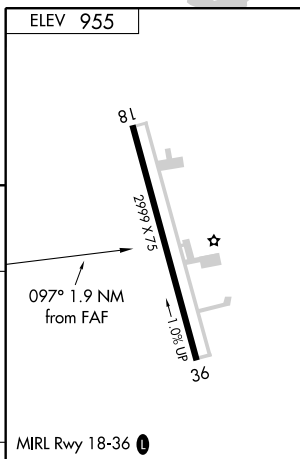
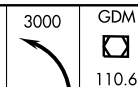
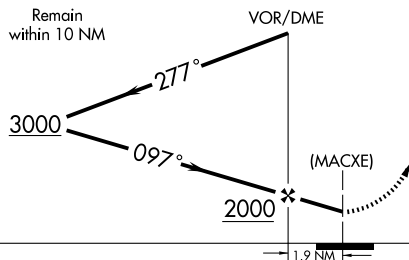
**MISSED APPROACH:** Climbing left turn to 3000 direct GDM VOR/DME and hold.

BOSTON CENTER  
123.75 338.2

UNICOM  
122.8 (CTAF) **L**



NE-1. 22 OCT 2009 to 19 NOV 2009



| CATEGORY | A           | B            | C            | D            | FAF to MAP 1.9 NM |      |      |      |      |      |
|----------|-------------|--------------|--------------|--------------|-------------------|------|------|------|------|------|
| CIRCLING | 1720-1      | 1720-1¼      | 1740-2¼      | 1740-2½      | Knots             | 60   | 90   | 120  | 150  | 180  |
|          | 765 (800-1) | 765 (800-1¼) | 785 (800-2¼) | 785 (800-2½) | Min:Sec           | 1:54 | 1:16 | 0:57 | 0:46 | 0:38 |

GPS RWY 11

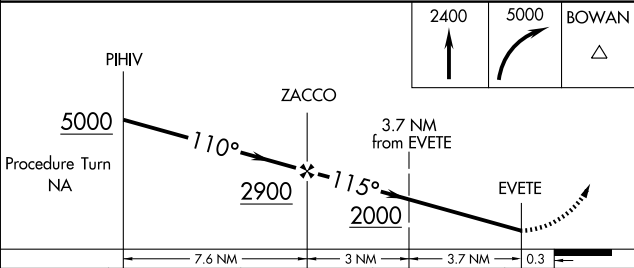
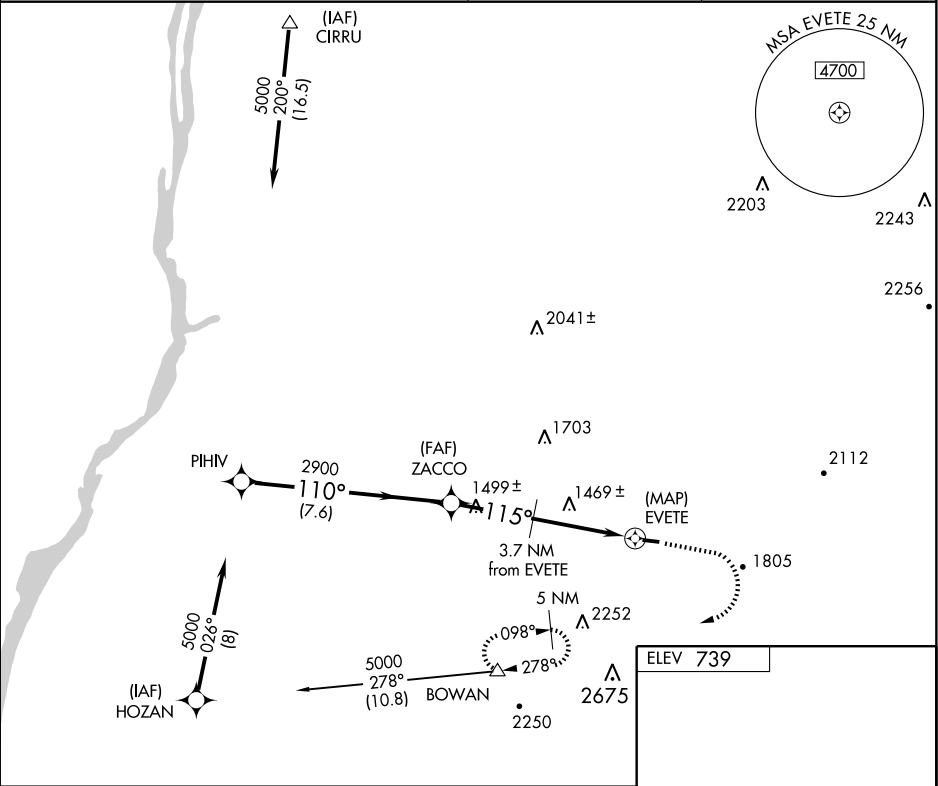
GREAT BARRINGTON/ WALTER J. KOLADZA (GBR)

|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 2409 |
| 115°    | TDZE     | 739  |
|         | Apt Elev | 739  |

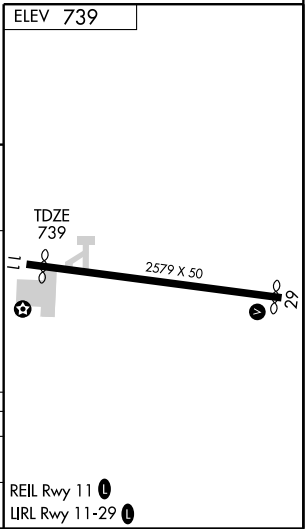
When local altimeter setting not recieved, procedure not authorized.

MISSED APPROACH: Climb to 2400, then climbing right turn to 5000 direct BOWAN WP and hold.

|                                 |                        |       |
|---------------------------------|------------------------|-------|
| ALBANY APP CON<br>132.825 307.2 | UNICOM<br>122.8 (CTAF) | 121.6 |
|---------------------------------|------------------------|-------|



| CATEGORY | A                        | B                        | C  | D |
|----------|--------------------------|--------------------------|----|---|
| S-11     | 1720-1¼<br>981 (1000-1¼) | 1720-1½<br>981 (1000-1½) | NA |   |
| CIRCLING | 1720-1¼<br>981 (1000-1¼) | 1720-1½<br>981 (1000-1½) | NA |   |



REIL Rwy 11  
URL Rwy 11-29

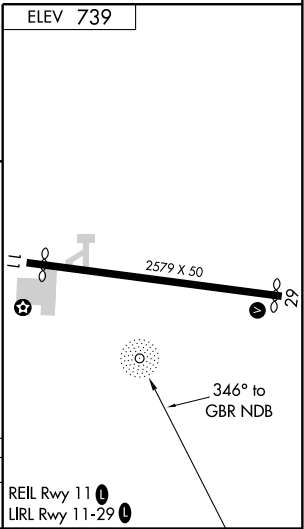
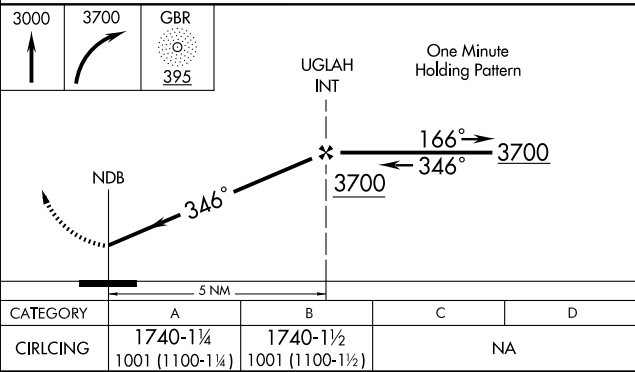
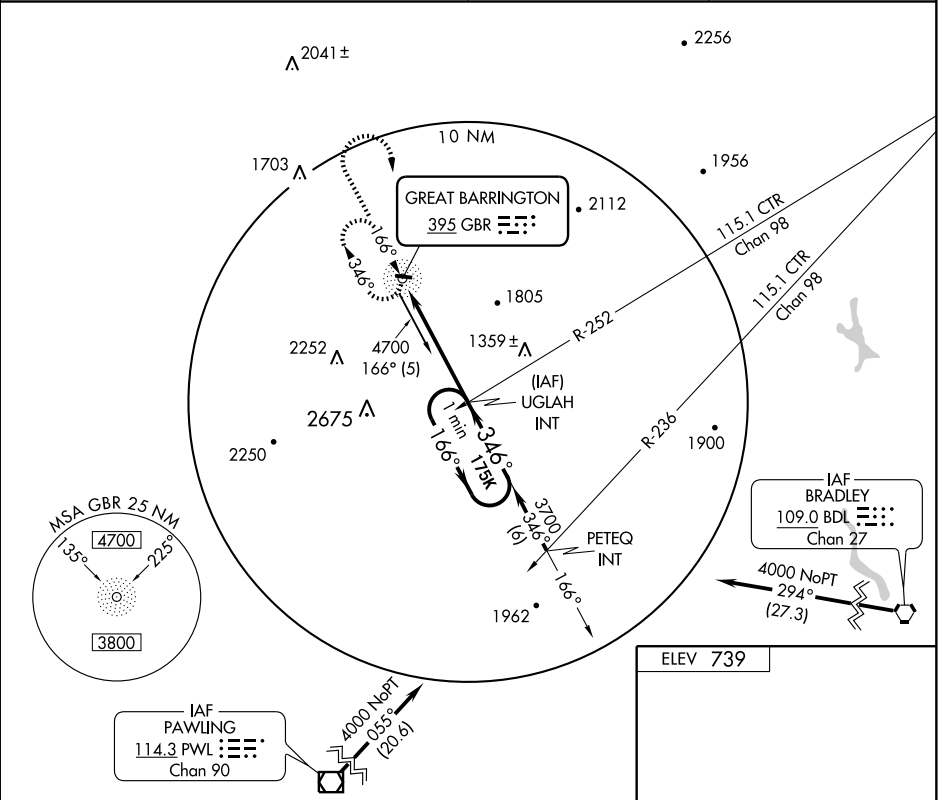


|     |     |         |                 |     |
|-----|-----|---------|-----------------|-----|
| NDB | GBR | APP CRS | Rwy Idg<br>TDZE | N/A |
| 395 |     | 346°    | Apt Elev        | 739 |

NDB or GPS-A

GREAT BARRINGTON/ WALTER J. KOLADZA (GBR)

|  |  |         |
|--|--|---------|
| <div>▼</div> <div>▲ NA</div> <div>When local altimeter setting not recieved,<br/>procedure not authorized.</div> | MISSED APPROACH: Climb to 3000, then climbing right turn to<br>3700 direct GBR NDB and hold. |         |
| ALBANY APP CON<br>132.825 307.2  | UNICOM<br>122.8 (CTAF)   | 121.6 0 |



NE-1, 22 OCT 2009 to 19 NOV 2009

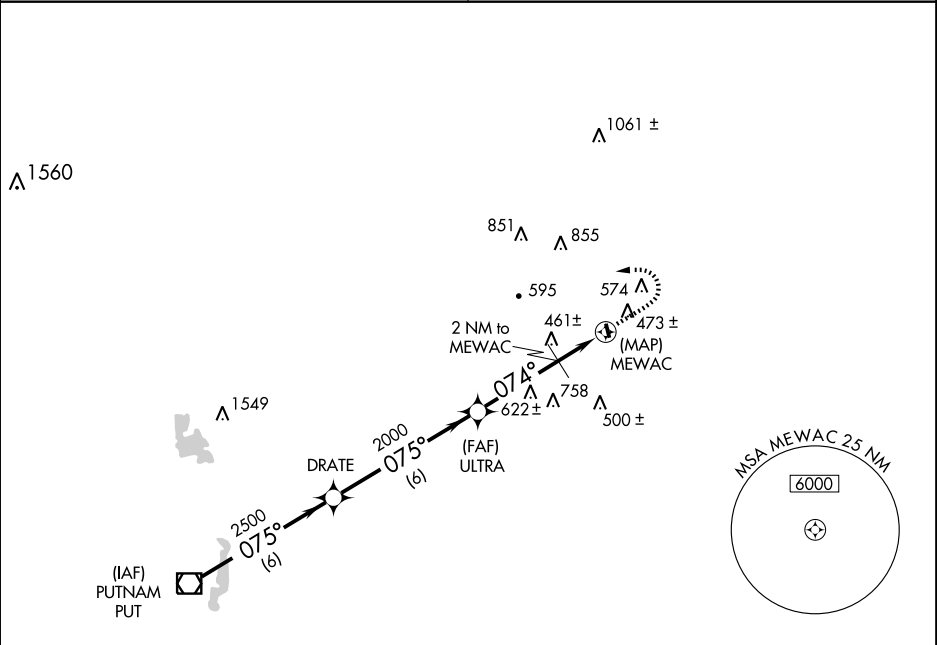
|         |          |     |
|---------|----------|-----|
| APP CRS | Rwy Idg  | N/A |
| 074°    | TDZE     | N/A |
|         | Apt Elev | 269 |

GPS-A

HOPEDALE INDUSTRIAL PARK (1B6)

|   |   |
|---|---|
| <div><div>▼</div><div>▲ NA</div></div> <div>Use North Central, Pawtucket, RI altimeter setting.<br/>Procedure NA at night except by prior arrangement for runway lights. Circling Rwy 18 NA at night.</div> | MISSED APPROACH: Climb to 1100, then climbing left turn to 3000 direct PUT VOR/DME. |
|---|---|

|                          |                        |
|--------------------------|------------------------|
| BRADLEY APP CON<br>119.0 | UNICOM<br>122.8 (CTAF) |
|--------------------------|------------------------|



|                                      |  |   |  |
|--------------------------------------|--|---|--|
| ELEV 269                             |  | 81<br>3172 x 90<br>108 ft up<br>36      |  |
| VOR/DME<br>3000<br>Procedure Turn NA |  | 1100 3000 PUT<br>117.4                  |  |
| DRA TE<br>2500                       |  | ULTRA<br>2000<br>2 NM to MEWAC<br>MEWAC |  |
| 6 NM                                 |  | 3.4 NM                                  |  |
| CATEGORY A                           |  | C                                       |  |
| CIRCLING 840-1 571 (600-1)           |  | NA                                      |  |
| LIRL Rwy 18-36                       |  |   |  |



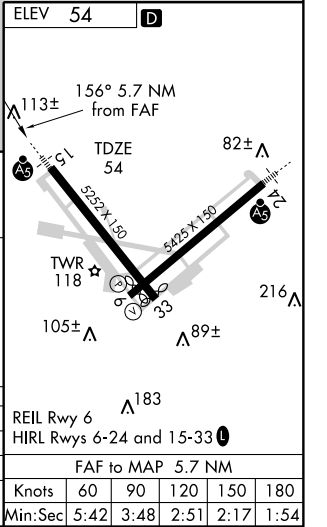
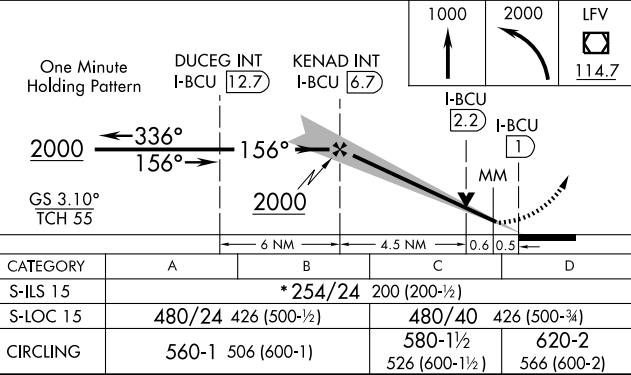
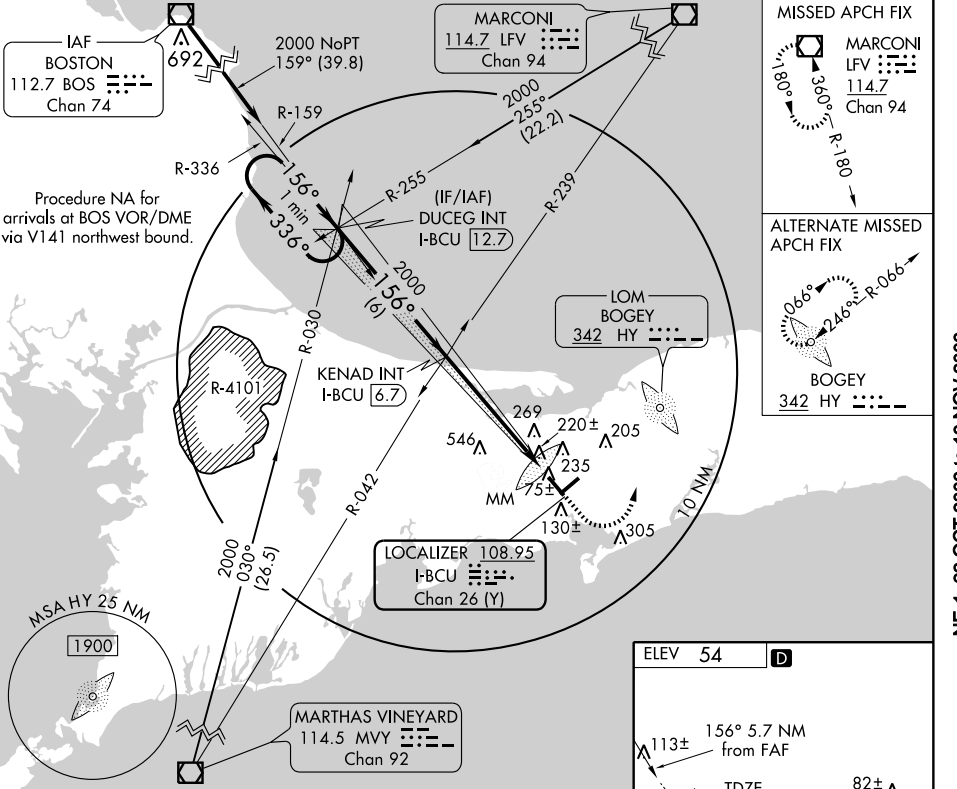
▼ \* RVR 1800 authorized with the use of FD or AP or HUD to DA. VDP NA when using Chatham altimeter setting. When local altimeter setting not received, use Chatham altimeter setting and increase all DA 33 feet and all MDA 40 feet , increase S-LOC 15 Cat D visibility to RVR 5000.

▲

MALSR


MISSED APPROACH: Climb to 1000 then climbing left turn to 2000 direct LFV VOR/DME and hold. When authorized by ATC, climb-in-hold to 3000.

|               |                              |  |                  |                    |                  |
|---------------|------------------------------|--|------------------|--------------------|------------------|
| ATIS<br>123.8 | CAPE APP CON★<br>118.2 284.6 | HYANNIS TOWER★<br>119.5 (CTAF) 0 257.8 | GND CON<br>121.9 | CLNC DEL<br>125.15 | UNICOM<br>122.95 |
|---------------|------------------------------|--|------------------|--------------------|------------------|



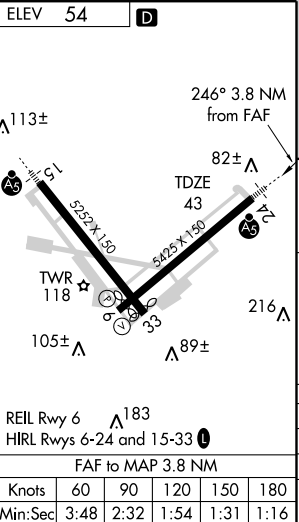
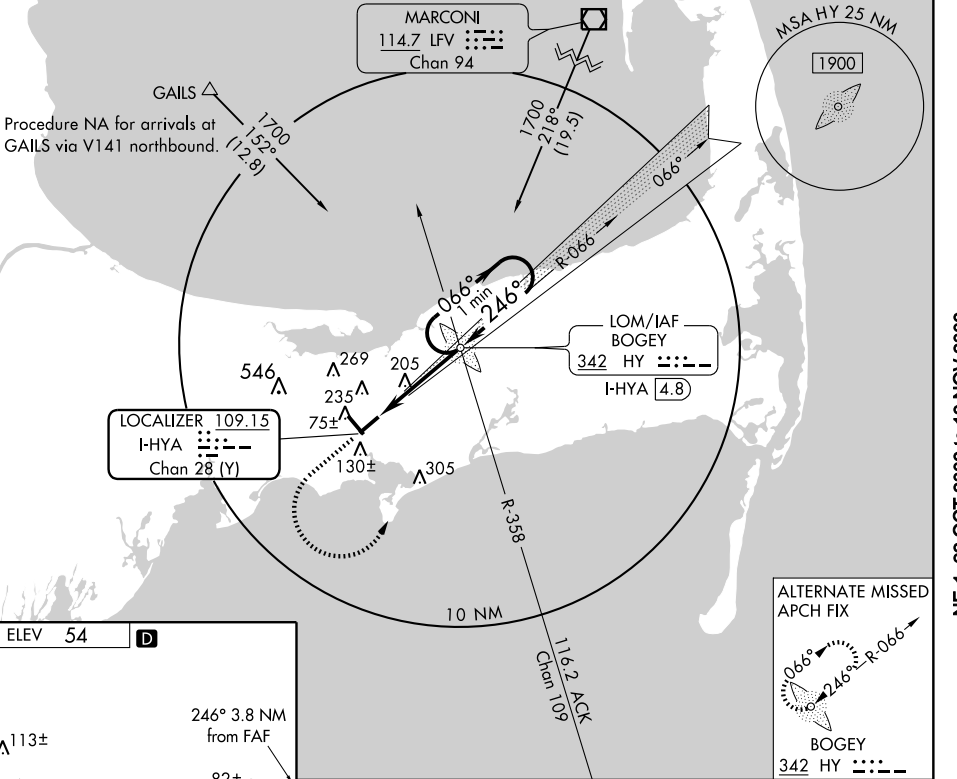
**T** Visibility reduction by helicopters NA. When local altimeter setting not received, use Chatham altimeter setting and increase all DA/MDA 40 feet.


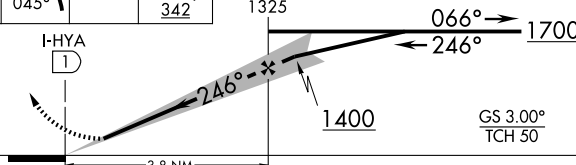
**A** Inoperative table does not apply to S-ILS all Cats, S-LOC Cats A and B. For inoperative MALS, increase S-LOC Cats C and D visibility to RVR 6000.

MALS  


MISSED APPROACH: Climb to 700, then climbing left turn to 1700 via heading 045° and ACK VOR/DME R-358 to BOGEY LOM/INT/I-HYA 4.8 DME and hold.

|               |                               |   |                  |                    |                  |
|---------------|-------------------------------|---|------------------|--------------------|------------------|
| ATIS<br>123.8 | CAPE APP CON ★<br>118.2 284.6 | HYANNIS TOWER ★<br>119.5 (CTAF) 0 257.8 | GND CON<br>121.9 | CLNC DEL<br>125.15 | UNICOM<br>122.95 |
|---------------|-------------------------------|---|------------------|--------------------|------------------|



|   |                   |                       |   |                            |                               |
|---|-------------------|-----------------------|---|----------------------------|-------------------------------|
| 700<br>↑  | 1700<br>↖<br>045° | ACK<br>R-358<br>116.2 | BOGEY<br><br>342 | BOGEY LOM/INT<br>I-HYA 4.8 | One Minute<br>Holding Pattern |
|  |                   |                       |   | 1325                       | 066° → 1700<br>← 246°         |
| CATEGORY  | A                 | B                     | C   | D                          |                               |
| S-ILS 24  | 293/50            |                       | 250 (300-1)   |                            |                               |
| S-LOC 24  | 460/50            |                       | 417 (500-1)   |                            |                               |
| CIRCLING  | 560-1 506 (600-1) |                       | 580-1½<br>526 (600-1½)  |                            | 620-2<br>566 (600-2)          |

|          |         |          |      |
|----------|---------|----------|------|
| WAAS     | APP CRS | Rwy Idg  | 5019 |
| CH 45799 | 066°    | TDZE     | 45   |
| W06A     |         | Apt Elev | 54   |

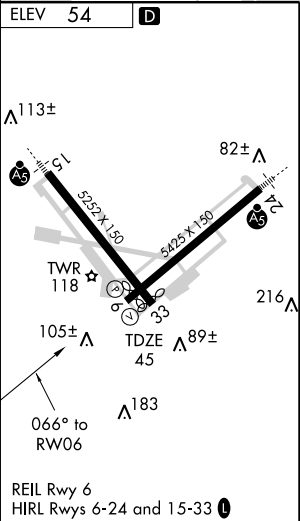
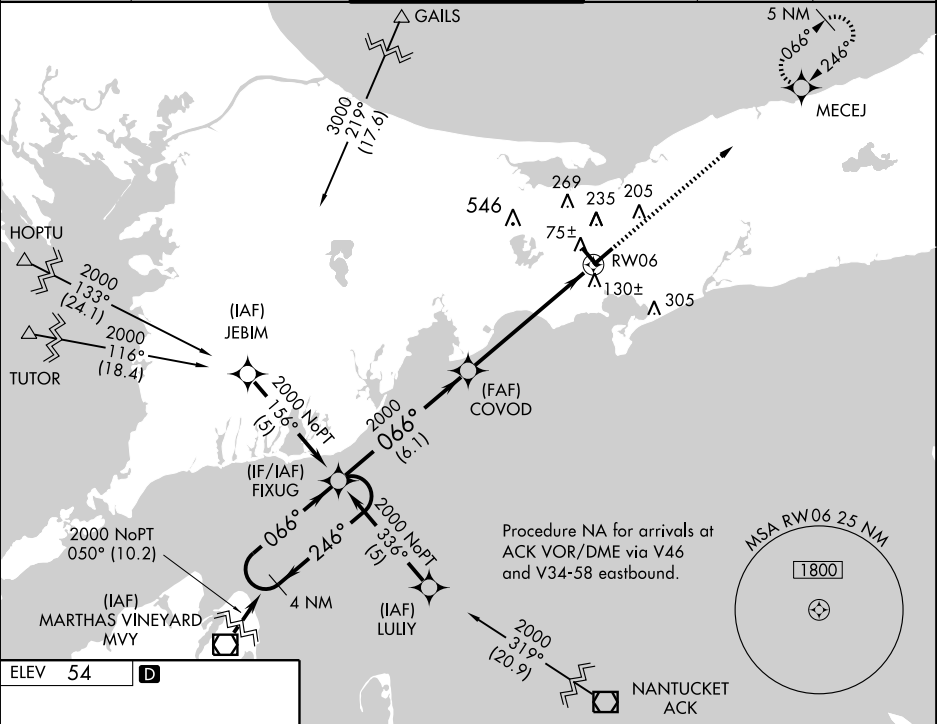
RNAV (GPS) RWY 6

HYANNIS/BARNSTABLE MUNI-BOARDMAN/POLANDO FIELD (HYA)

DME/DME RNP-0.3 NA. BARO-VNAV NA below -15°C (5°F). BARO-VNAV NA when using Chatham altimeter setting. If local altimeter setting not received, use Chatham altimeter setting and increase all DAs/MDAs 40 feet.

MISSED APPROACH: Climb to 1700 direct MECEJ and hold.

|       |                |                    |         |          |        |
|-------|----------------|--------------------|---------|----------|--------|
| ATIS  | CAPE APP CON ★ | HYANNIS TOWER ★    | GND CON | CLNC DEL | UNICOM |
| 123.8 | 118.2 284.6    | 119.5 (CTAF) 257.8 | 121.9   | 125.15   | 122.95 |



|                         |        |                    |                         |                        |  |
|-------------------------|--------|--------------------|-------------------------|------------------------|--|
| 4 NM<br>Holding Pattern |        | 1700<br>↑          |                         | MECEJ<br>✦             |  |
| FIXUG                   |        | COVOD              |                         | RW06                   |  |
| 2000 ← 246°<br>066° →   |        | 066° → ✦<br>2000 ↗ |                         | ↗                      |  |
| GS 3.00°<br>TCH 36      |        | 6.1 NM             |                         | 5.9 NM                 |  |
| CATEGORY                | A      | B                  | C                       | D                      |  |
| LPV DA                  | 316-1  |                    | 271 (300-1)             |                        |  |
| LNAV/<br>VNAV           | 443-1½ |                    | 398 (400-1½)            |                        |  |
| LNAV MDA                | 480-1  | 435 (500-1)        | 480-1 ¼<br>435 (500-1¼) | 480-1½<br>435 (500-1½) |  |
| CIRCLING                | 560-1½ | 506 (600-1½)       | 580-1½<br>526 (600-1½)  | 620-2<br>566 (600-2)   |  |

|          |         |          |      |
|----------|---------|----------|------|
| WAAS     | APP CRS | Rwy Idg  | 5252 |
| CH 61112 | 156°    | TDZE     | 54   |
| W15A     |         | Apt Elev | 54   |

HYANNIS/  
BARNSTABLE MUNI-BOARDMAN/POLANDO FIELD (HYA)

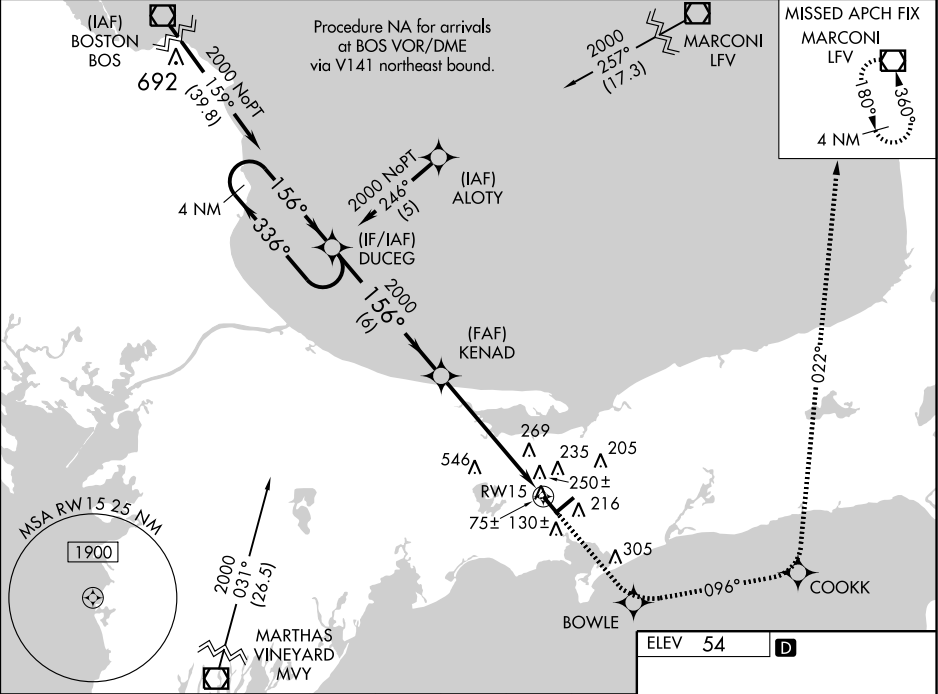
# RNAV (GPS) RWY 15

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 39°C (102°F). DME/DME RNP -0.3. When local altimeter setting not received, use Chatham altimeter setting and increase all DA 33 feet and all MDA 40 feet. Baro-VNAV and VDP NA when using Chatham altimeter setting.

**MALSR**

**MISSED APPROACH:** Climb to 2000 direct BOWLE and via 096° track to COOKK and via 022° track to LFV VOR/DME and hold.

|               |                               |   |                  |                    |                  |
|---------------|-------------------------------|---|------------------|--------------------|------------------|
| ATIS<br>123.8 | CAPE APP CON ★<br>118.2 284.6 | HYANNIS TOWER ★<br>119.5 (CTAF) 0 257.8 | GND CON<br>121.9 | CLNC DEL<br>125.15 | UNICOM<br>122.95 |
|---------------|-------------------------------|---|------------------|--------------------|------------------|



4 NM Holding Pattern

2000 BOWLE 096° track COOKK 022° track LFV

DUCG KENAD

\*LNAV only.

2000 336° 156° 156° 156°

GS 3.10° TCH 55

6 NM 4.2 NM 1.5 NM

RW15

\*1.5 NM to RW15

| CATEGORY     | A      | B             | C                            | D                         |
|--------------|--------|---------------|------------------------------|---------------------------|
| LPV DA       |        | 254/24        | 200 (200-1/2)                |                           |
| LNAV/VNAV DA |        | 569/60        | 515 (600-1 1/4)              |                           |
| LNAV MDA     | 600/24 | 546 (600-1/2) | 600/50<br>546 (600-1)        | 600/60<br>546 (600-1 1/4) |
| CIRCLING     | 600-1  | 546 (600-1)   | 600-1 1/2<br>546 (600-1 1/2) | 620-2<br>566 (600-2)      |

ELEV 54 D

113± 156° to RW15 TDZE 54

5425 X 150

5425 X 150

TWR 118

105± 82± 216 183 89±


REIL Rwy 6  
HIRL Rwy 6-24 and 15-33

|  |                        |                             |                                       |
|--|------------------------|-----------------------------|---------------------------------------|
| WAAS<br>CH <b>77812</b><br><b>W24A</b> | APP CRS<br><b>246°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>5425</b><br><b>43</b><br><b>54</b> |
|--|------------------------|-----------------------------|---------------------------------------|

# RNAV (GPS) RWY 24

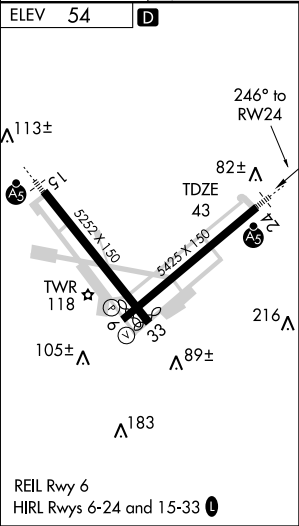
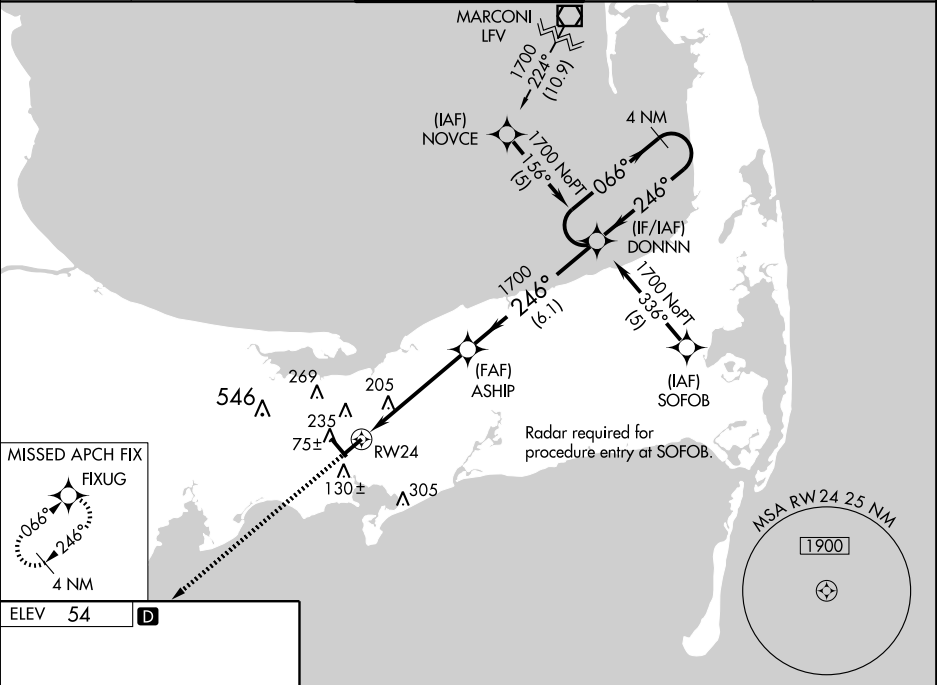
HYANNIS/BARNSTABLE MUNI-BOARDMAN/POLANDO FIELD (HYA)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 48°C (118°F). DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA.  
**⚠** When local altimeter setting not received, use Chatham altimeter setting and increase all DA 33 feet and all MDA 40 feet. Baro-VNAV NA when using Chatham Muni altimeter setting. For inoperative MALSR, increase LNAV Cat C visibility to RVR 6000. Inoperative table does not apply to LPV all Cats, and LNAV Cats A and B.

**MALSR**  


**MISSED APPROACH:**  
Climb to 2000 direct  
FIXUG and hold.

|                      |                                      |  |                         |                           |                         |
|----------------------|--------------------------------------|--|-------------------------|---------------------------|-------------------------|
| ATIS<br><b>123.8</b> | CAPE APP CON ★<br><b>118.2 284.6</b> | HYANNIS TOWER ★<br><b>119.5 (CTAF) 0 257.8</b> | GND CON<br><b>121.9</b> | CLNC DEL<br><b>125.15</b> | UNICOM<br><b>122.95</b> |
|----------------------|--------------------------------------|--|-------------------------|---------------------------|-------------------------|



2000

↑

FIXUG

✳

ASHIP

DONNN

4 NM  
Holding Pattern

066° →

← 246°

1700

GS 3.00°

TCH 50

RW24

⋯

5 NM

6.1 NM

246°

1700

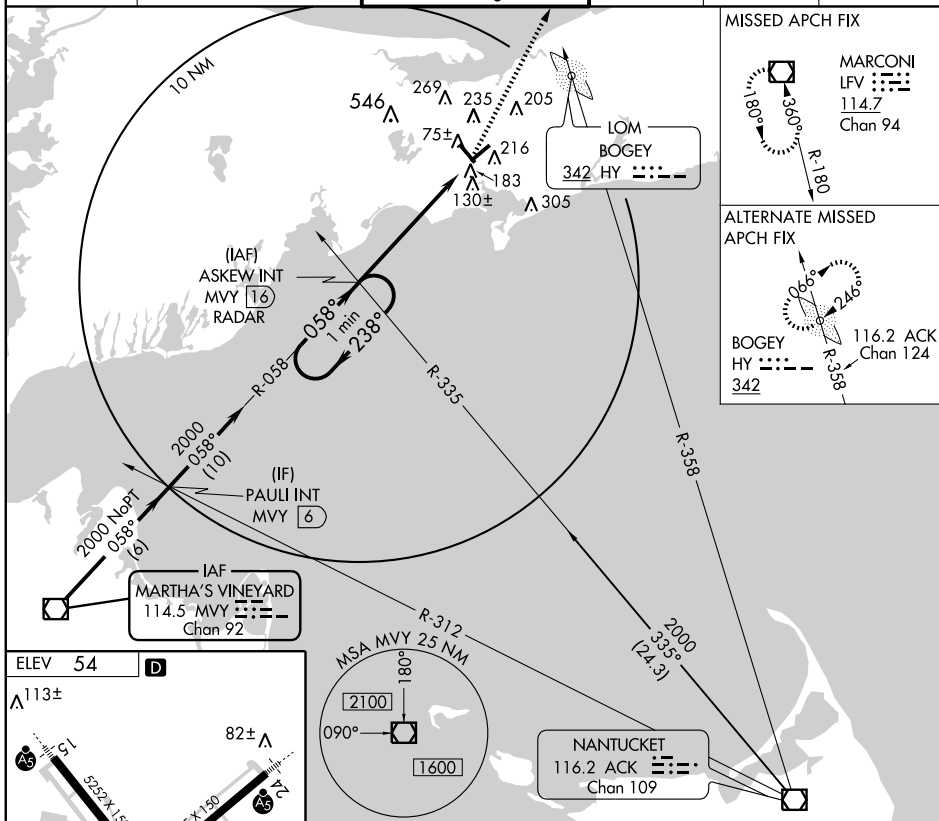
|              |       |             |                        |                      |
|--------------|-------|-------------|------------------------|----------------------|
| CATEGORY     | A     | B           | C                      | D                    |
| LPV DA       |       | 318/50      | 275 (300-1)            |                      |
| LNAV/VNAV DA |       | 441/50      | 398 (400-1)            |                      |
| LNAV MDA     |       | 500/50      | 457 (500-1)            |                      |
| CIRCLING     | 560-1 | 506 (600-1) | 580-1½<br>526 (600-1½) | 620-2<br>566 (600-2) |



HYANNIS/  
BARNSTABLE MUNI-BOARDMAN/POLANDO FIELD (HYA)

**MISSED APPROACH:** Climb to 2000 direct LFV VOR/DME and hold. When authorized by ATC, climb-in-hold to 3000.

|       |                |                      |         |          |        |
|-------|----------------|----------------------|---------|----------|--------|
| ATIS  | CAPE APP CON ★ | HYANNIS TOWER ★      | GND CON | CLNC DEL | UNICOM |
| 123.8 | 118.2 284.6    | 119.5 (CTAF) 0 257.8 | 121.9   | 125.15   | 122.95 |



NE-1. 22 OCT 2009 to 19 NOV 2009


[illegible]HIRL Rwys 6-24 and 15-33 **L**

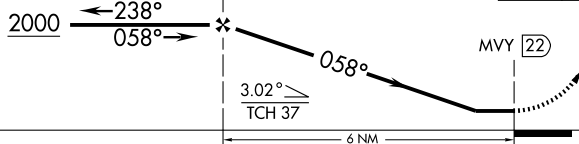
FAF to MAP 6 NM

|         |      |      |      |      |      |
|---------|------|------|------|------|------|
| Knots   | 60   | 90   | 120  | 150  | 180  |
| Min:Sec | 5:59 | 3:59 | 2:59 | 2:24 | 2:00 |

### One Minute Holding Pattern

ASKEW INT  
MVY 16  
RADAR

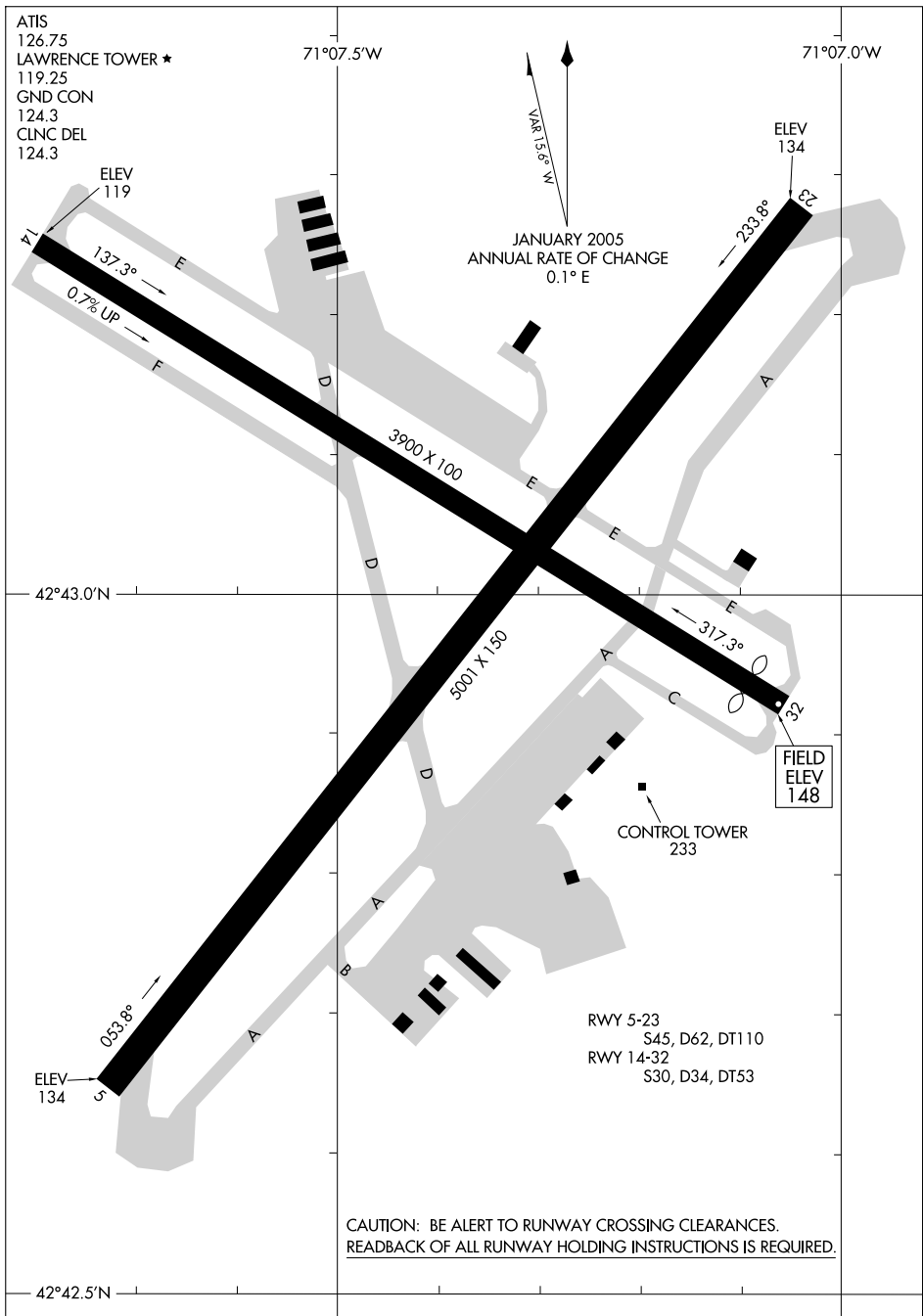
|      |   |
|------|---|
| 2000 | LFV   |
| ↑    |  |
|      | 114.7   |



| CATEGORY | A                    | B                      | C                      | D                      |
|----------|----------------------|------------------------|------------------------|------------------------|
| S-6      | 900-1<br>855 (900-1) | 900-1¼<br>855 (900-1¼) | 900-2½<br>855 (900-2½) | 900-2¾<br>855 (900-2¾) |
| CIRCLING | 900-1<br>846 (900-1) | 900-1¼<br>846 (900-1¼) | 900-2½<br>846 (900-2½) | 900-2¾<br>846 (900-2¾) |

## AIRPORT DIAGRAM

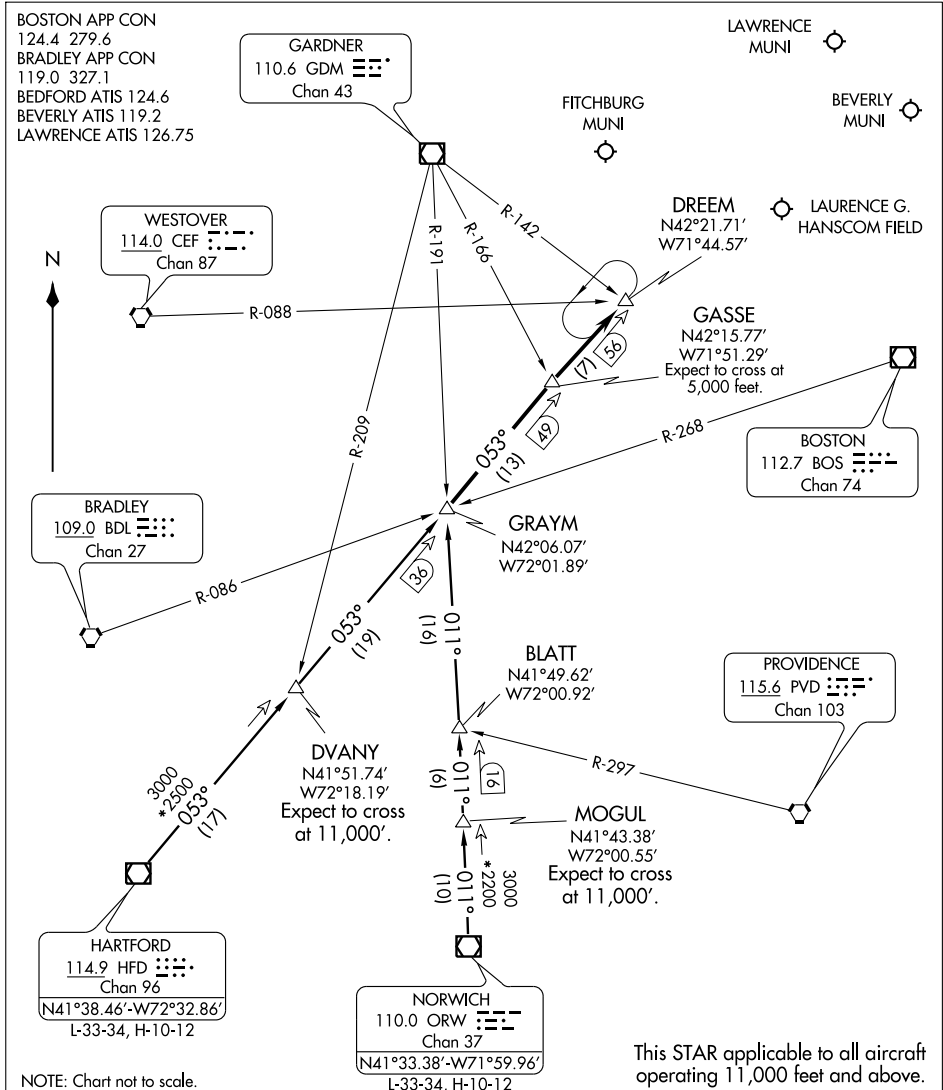
AL-654 (FAA)

LAWRENCE MUNI (LWM)  
LAWRENCE, MASSACHUSETTS

## GRAYM TWO ARRIVAL

ST-626 (FAA)

BEDFORD, MASSACHUSETTS



NE-1, 22 OCT 2009 to 19 NOV 2009

**HARTFORD TRANSITION (HFD.GRAYM2):** From over HFD VOR/DME via HFD R-053 to GRAYM INT. Thence. . .

**NORWICH TRANSITION (ORW.GRAYM2):** From over ORW VOR/DME via ORW R-011 to GRAYM INT. Thence. . .

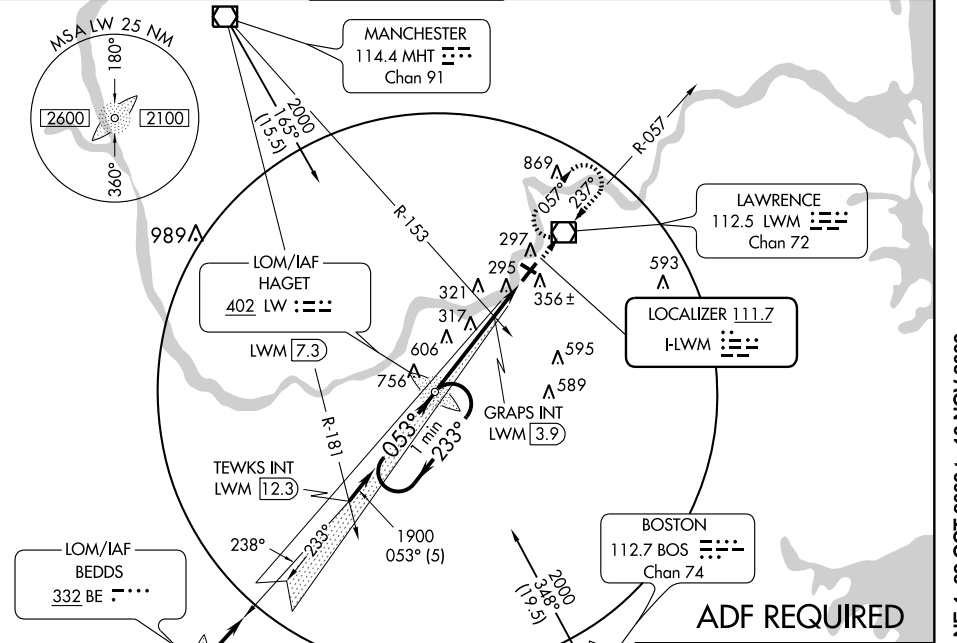
. . . From over GRAYM INT via HFD VOR/DME R-053 to DROOM INT, then direct destination airport. Expect radar vectors to final approach course.

▼

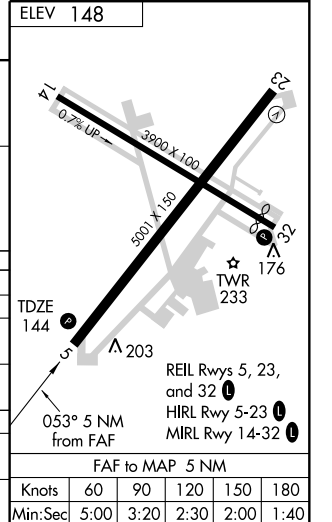
▲

MISSED APPROACH: Climb to 2000  
direct LWM VOR/DME and hold.

|                |                               |                                     |                  |                   |                 |
|----------------|-------------------------------|-------------------------------------|------------------|-------------------|-----------------|
| ATIS<br>126.75 | BOSTON APP CON<br>124.4 279.6 | LAWRENCE TOWER ★<br>119.25 (CTAF) 0 | GND CON<br>124.3 | CLNC DEL<br>124.3 | UNICOM<br>122.8 |
|----------------|-------------------------------|-------------------------------------|------------------|-------------------|-----------------|



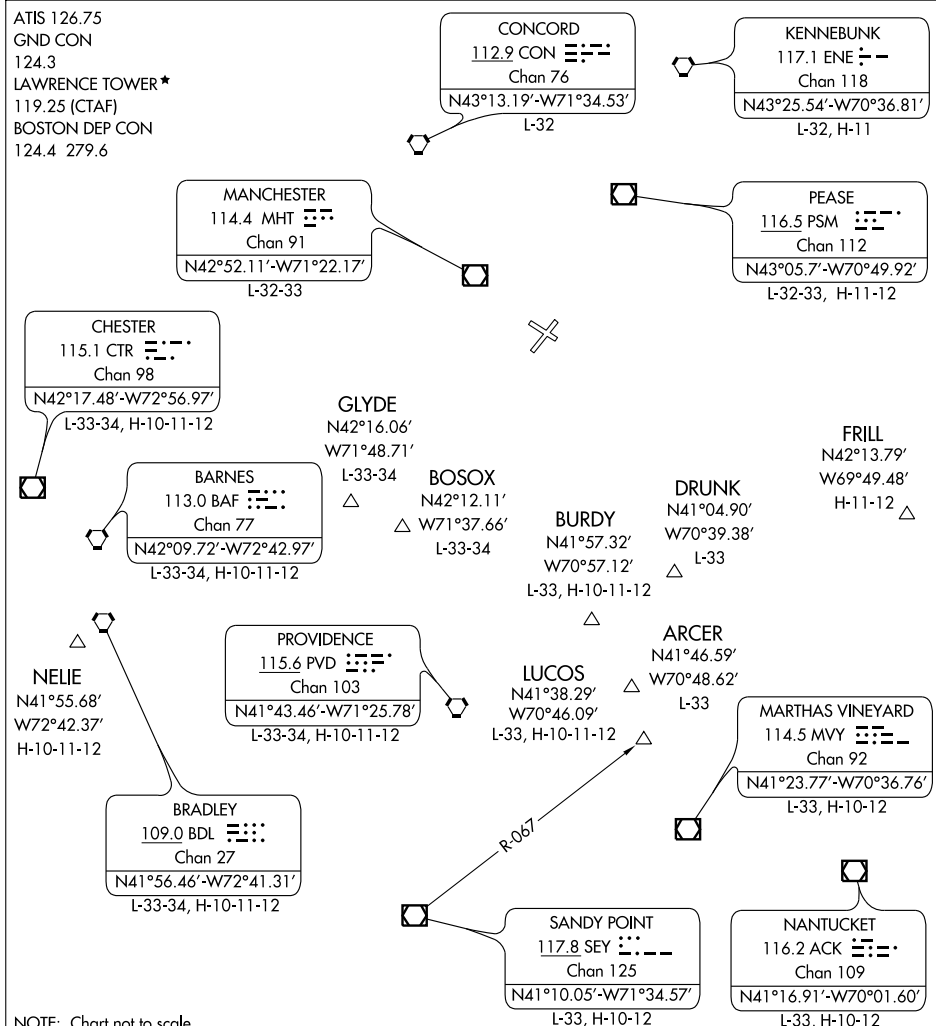
|                            |                   |             |                     |                     |
|----------------------------|-------------------|-------------|---------------------|---------------------|
| One Minute Holding Pattern |                   |             |                     |                     |
|                            |                   |             |                     |                     |
| GS 3.00° TCH 56            |                   |             |                     |                     |
| CATEGORY                   | A                 | B           | C                   | D                   |
| S-ILS 5                    | 344-¾ 200 (200-¾) |             |                     |                     |
| S-LOC 5                    | 700-1             | 556 (600-1) | 700-1½ 556 (600-1½) | 700-1¾ 556 (600-1¾) |
| CIRCLING                   | 720-1             | 572 (600-1) | 720-1½ 572 (600-1½) | 740-2 592 (600-2)   |
| GRAPS INT MINIMUMS         |                   |             |                     |                     |
| S-LOC 5                    | 500-1 356 (400-1) |             |                     | 500-1¼ 356 (400-1¼) |
| CIRCLING                   | 720-1             | 572 (600-1) | 720-1½ 572 (600-1½) | 740-2 592 (600-2)   |



NE-1: 22 OCT 2009 to 19 NOV 2009

## LAWRENCE FOUR DEPARTURE

AL-654 (FAA)

LAWRENCE MUNI(LWM)  
LAWRENCE, MASSACHUSETTS

NE-1, 22 OCT 2009 to 19 NOV 2009

## DEPARTURE ROUTE DESCRIPTION

All aircraft expect radar vectors to appropriate depicted NAVAID/fix. Maintain 2000'. Expect further clearance to filed altitude/flight level ten minutes after departure.

TAKE-OFF ALL RUNWAYS: Heading as assigned by ATC for vectors to assigned NAVAID/fix.

▼

▲

MISSED APPROACH: Climb to 2000  
direct LWM VOR/DME and hold.

ATIS  
126.75

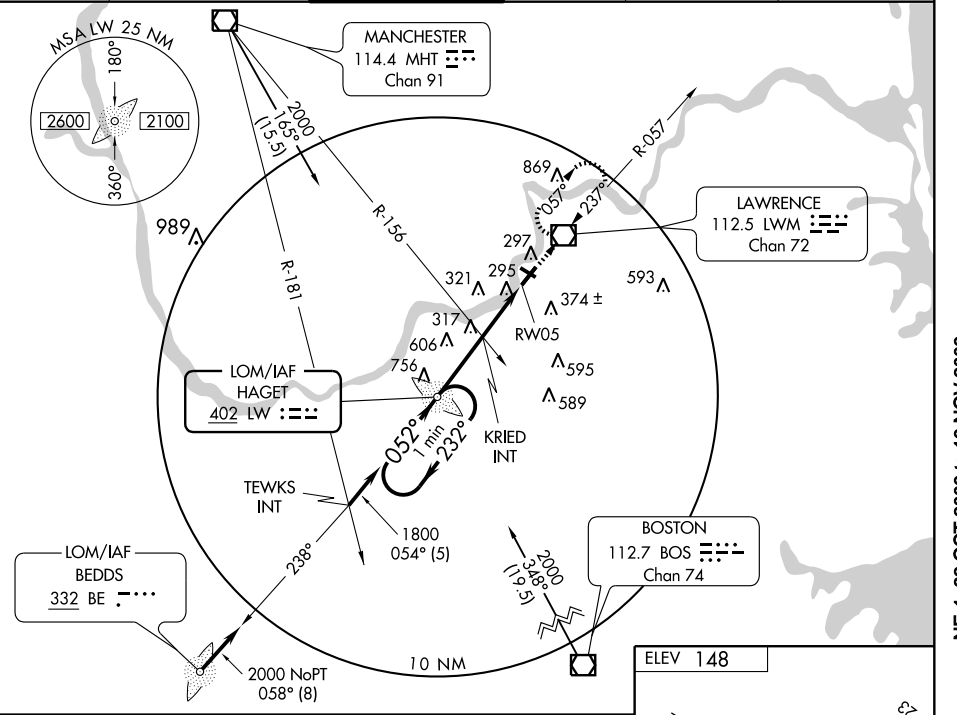
BOSTON APP CON  
124.4 279.6

LAWRENCE TOWER ★  
119.25 (CTAF) 0

GND CON  
124.3

CLNC DEL  
124.3

UNICOM  
122.8



One Minute Holding Pattern

2000 ← 232°  
052° →

LOM

2000

LWM  
112.5

VGSI and descent angles not coincident.

1800 \* 052°

2.97°

TCH 55

KRIED INT

RW05

920

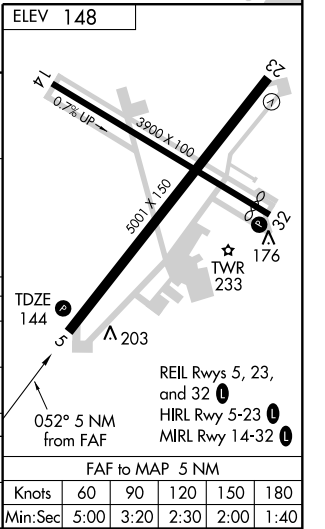
2.7 NM

2.3 NM

| CATEGORY | A                    | B                      | C                      | D                      |
|----------|----------------------|------------------------|------------------------|------------------------|
| S-5      | 920-1<br>776 (800-1) | 920-1¼<br>776 (800-1¼) | 920-2¼<br>776 (800-2¼) | 920-2½<br>776 (800-2½) |
| CIRCLING | 920-1<br>772 (800-1) | 920-1¼<br>772 (800-1¼) | 920-2¼<br>772 (800-2¼) | 920-2½<br>772 (800-2½) |

KRIED INT MINIMUMS

|          |                   |                        |                        |
|----------|-------------------|------------------------|------------------------|
| S-5      | 680-1 536 (600-1) | 680-1½<br>536 (600-1½) | 680-1¾<br>536 (600-1¾) |
| CIRCLING | 720-1 572 (600-1) | 720-1½<br>572 (600-1½) | 740-2<br>592 (600-2)   |

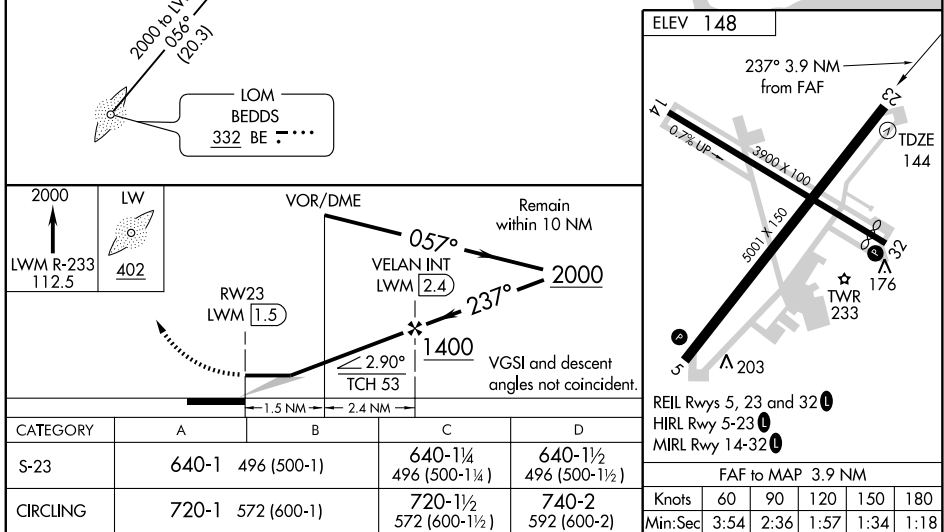
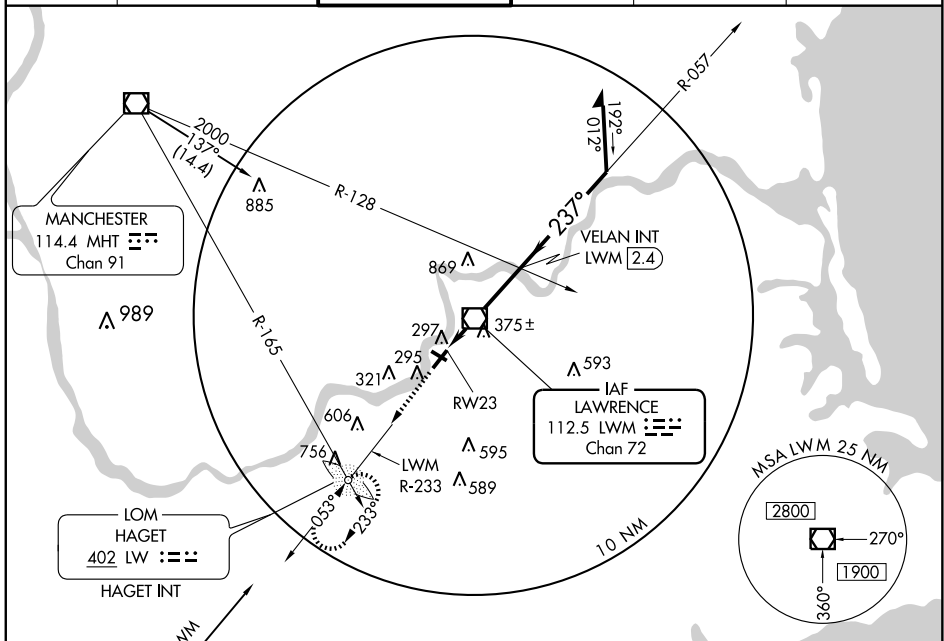


NE-1: 22 OCT 2009 to 19 NOV 2009

VOR or GPS RWY 23  
LAWRENCE MUNI (LWM)

MISSED APPROACH: Climb to 2000 via LWM R-233 to HAGET LOM/Int and hold.

|        |                |                        |         |          |        |
|--------|----------------|------------------------|---------|----------|--------|
| ATIS   | BOSTON APP CON | LAWRENCE TOWER ★       | GND CON | CLNC DEL | UNICOM |
| 126.75 | 124.4 279.6    | 119.25 (CTAF) <b>L</b> | 124.3   | 124.3    | 122.8  |



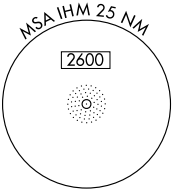
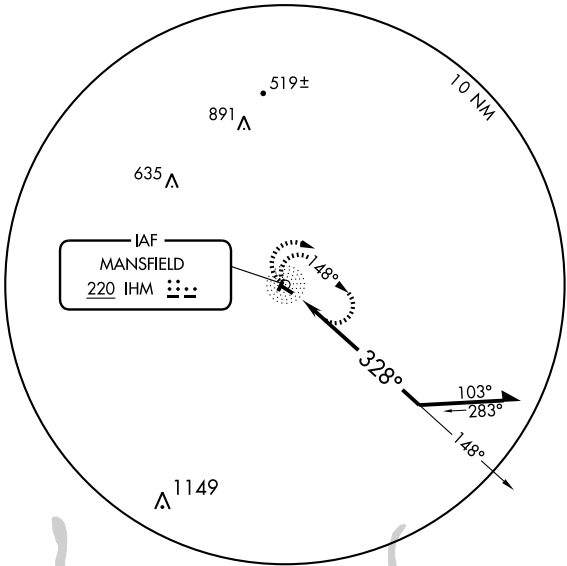
|                       |                        |                             |   |
|-----------------------|------------------------|-----------------------------|---|
| NDB IHM<br><b>220</b> | APP CRS<br><b>328°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>3264</b><br><b>122</b><br><b>122</b> |
|-----------------------|------------------------|-----------------------------|---|

NDB RWY 32  
MANSFIELD MUNI (1B9)

▼ Use Taunton Muni - King Field altimeter setting.  
▲ NA Circling NA to Rwy's 4 and 22.

MISSED APPROACH: Climbing right turn to 2000 in IHM NDB holding pattern.

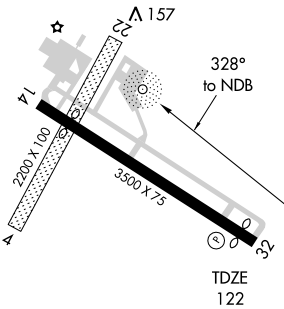
|                                      |                                 |
|--------------------------------------|---------------------------------|
| BOSTON APP CON<br><b>124.1 382.0</b> | UNICOM<br><b>123.0 (CTAF)</b> 0 |
|--------------------------------------|---------------------------------|



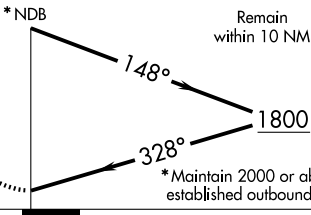
PROVIDENCE  
115.6 PVD  
Chan 103



ELEV 122



|      |            |
|------|------------|
| 2000 | IHM<br>220 |
|------|------------|



\* Maintain 2000 or above until established outbound for PT.

| CATEGORY | A     | B           | C  | D  |
|----------|-------|-------------|----|----|
| S-32     | 720-1 | 598 (600-1) | NA | NA |
| CIRCLING | 720-1 | 598 (600-1) | NA | NA |



MIRL Rwy 14-32 0



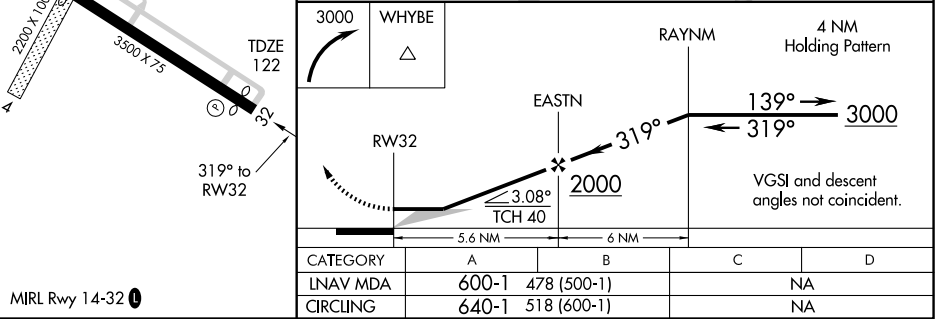
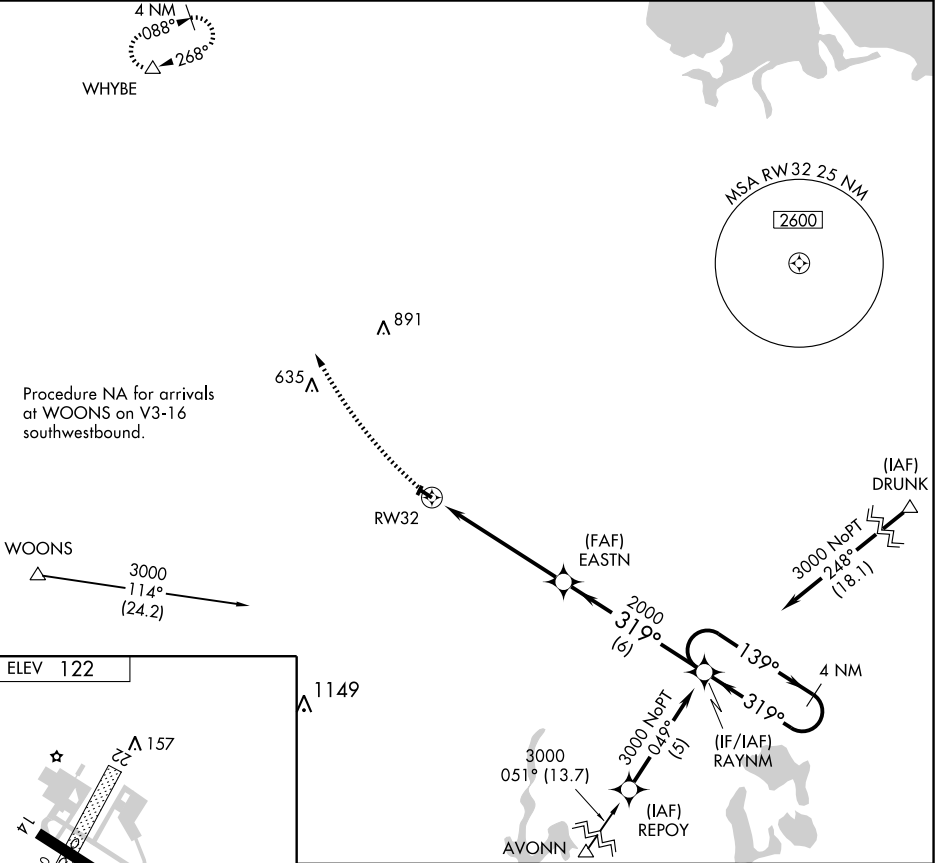
|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 3264 |
| 319°    | TDZE     | 122  |
|         | Apt Elev | 122  |

# RNAV (GPS) RWY 32

MANSFIELD MUNI (1B9)

|   |  |
|---|--|
|  GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.<br> Use Taunton Muni - King Field altimeter setting.<br>Circling NA to Rwys 4 and 22. | MISSED APPROACH: Climbing right turn to 3000 direct WHYBE WP and hold. |
|---|--|

|                               |                          |
|-------------------------------|--------------------------|
| BOSTON APP CON<br>124.1 382.0 | UNICOM<br>123.0 (CTAF) 0 |
|-------------------------------|--------------------------|



MIRL Rwy 14-32 0

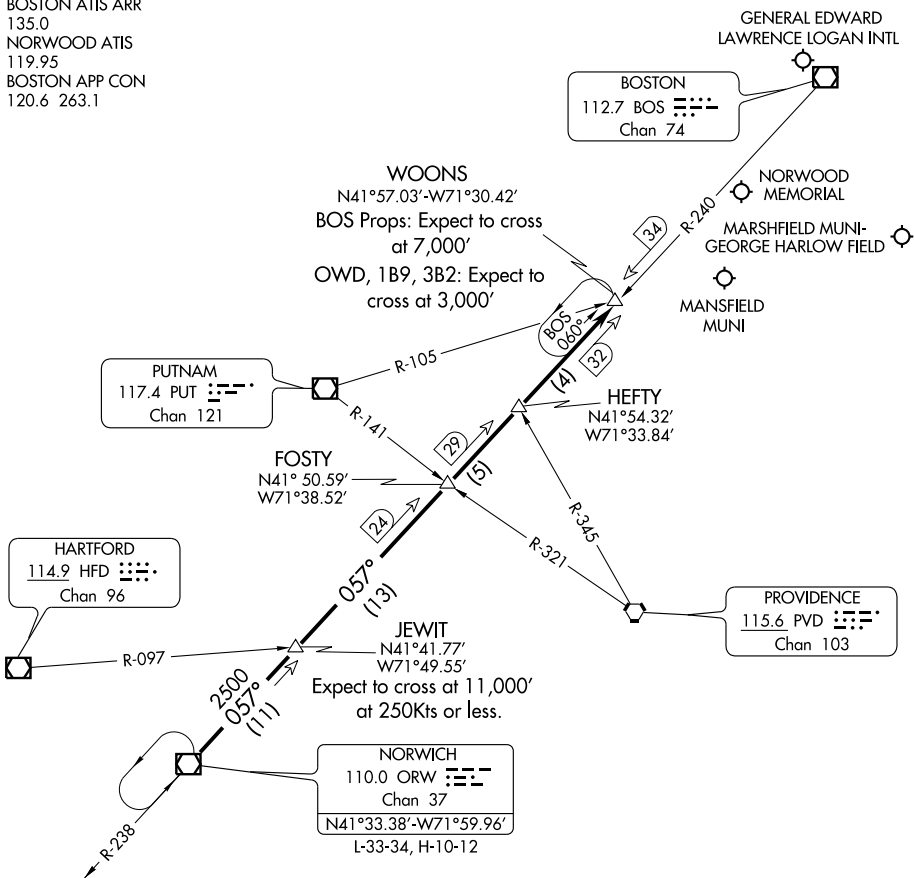
NE-1: 22 OCT 2009 to 19 NOV 2009

## WOONS ONE ARRIVAL

ST-58 (FAA)

BOSTON, MASSACHUSETTS

BOSTON ATIS ARR  
135.0  
NORWOOD ATIS  
119.95  
BOSTON APP CON  
120.6 263.1



NE-1, 22 OCT 2009 to 19 NOV 2009

From over ORW VOR/DME via ORW R-057 to WOONS INT. Expect radar vectors to final.

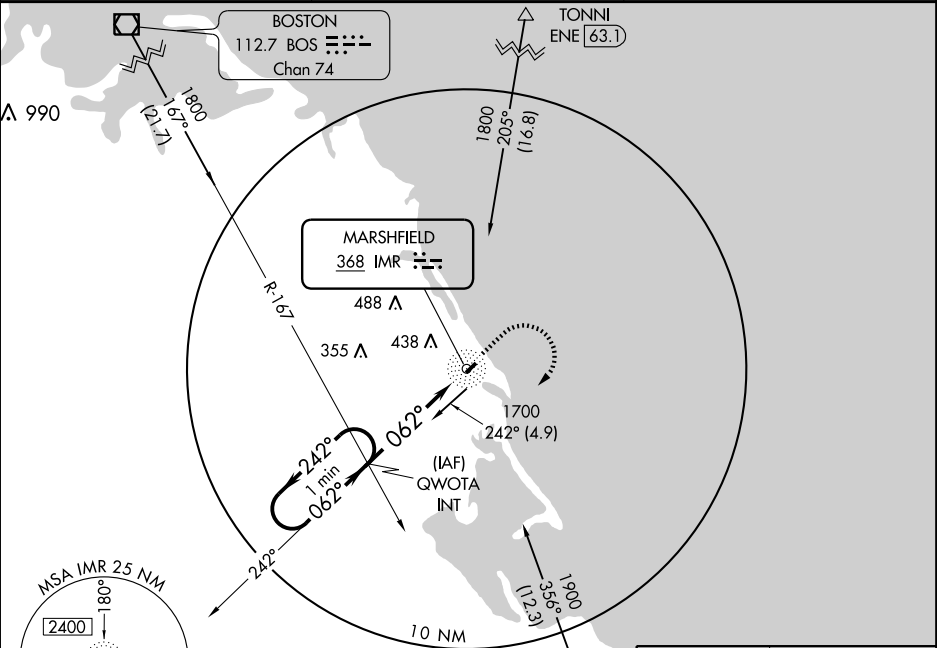
NDB RWY 6

|         |         |          |      |
|---------|---------|----------|------|
| NDB IMR | APP CRS | Rwy Idg  | 3001 |
| 368     | 062°    | TDZE     | 11   |
|         |         | Apt Elev | 11   |

MARSHFIELD MUNI - GEORGE HARLOW FIELD (GHG)

|   |  |
|---|--|
| <div><div></div><div>NA</div></div> <div>Obtain local altimeter setting on CTAF; when not received, use Boston-Logan altimeter setting.</div> | MISSED APPROACH: Climb to 800 then climbing right turn to 1700 via IMR NDB bearing 242° to QWOTA Int and hold. |
|---|--|

|                 |                         |                          |
|-----------------|-------------------------|--------------------------|
| AWOS-3<br>120.0 | BOSTON APP CON<br>124.1 | UNICOM<br>122.8 (CTAF) 0 |
|-----------------|-------------------------|--------------------------|



| CATEGORY                                | A                    | B                    | C  | D |
|---|----------------------|----------------------|----|---|
| S-6                                     | 580-1                | 569 (600-1)          | NA |   |
| CIRCLING                                | 580-1<br>569 (600-1) | 600-1<br>589 (600-1) | NA |   |
| BOSTON-LOGAN ALTIMETER SETTING MINIMUMS |                      |                      |    |   |
| S-6                                     | 640-1                | 629 (700-1)          | NA |   |
| CIRCLING                                | 640-1<br>629 (700-1) | 660-1<br>649 (700-1) | NA |   |

NDB IMR

368

APP CRS

248°

Rwy Idg TDZE

3001 9

Apt Elev

11

MARSHFIELD MUNI - GEORGE HARLOW FIELD (GHG)

NDB RWY 24

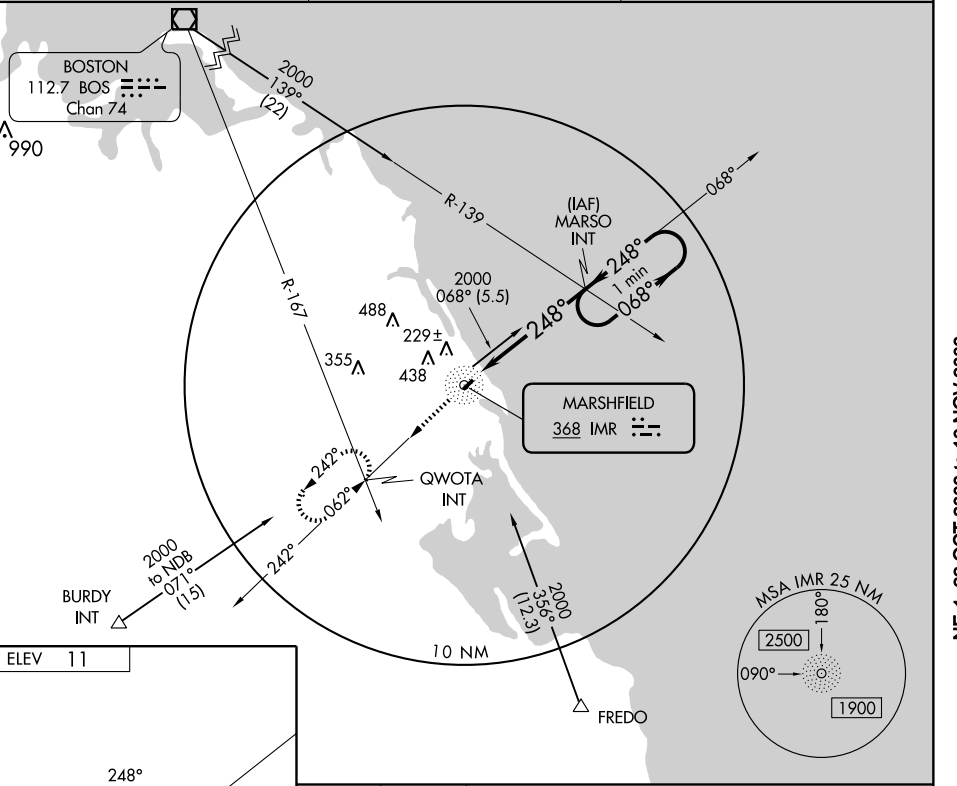
▼

▲

Visibility reduction by helicopters NA.  
When local altimeter setting not received, use Plymouth altimeter setting and increase all MDA 60 feet.

MISSED APPROACH: Climb to 1700 via 242° bearing from IMR NDB to QWOTA INT and hold.

|                 |                         |                          |
|-----------------|-------------------------|--------------------------|
| AWOS-3<br>120.0 | BOSTON APP CON<br>124.1 | UNICOM<br>122.8 (CTAF) 0 |
|-----------------|-------------------------|--------------------------|



ELEV 11

REIL Rwy 6 0  
MIRL Rwy 6-24 0

|                   |      |      |      |      |      |
|-------------------|------|------|------|------|------|
| FAF to MAP 5.5 NM |      |      |      |      |      |
| Knots             | 60   | 90   | 120  | 150  | 180  |
| Min:Sec           | 5:30 | 3:40 | 2:45 | 2:12 | 1:50 |

1700  
IMR 368  
BRG 242°

QWOTA INT

MARSO INT

NDB

One Minute Holding Pattern

068° → 2000

← 248°

1700

≤ 3.00°  
TCH 45



0.3 5.2 NM

| CATEGORY | A           | B           | C  | D |
|----------|-------------|-------------|----|---|
| S-24     | 580-1       | 571 (600-1) | NA |   |
| CIRCLING | 580-1       | 620-1       | NA |   |
|          | 569 (600-1) | 609 (700-1) |    |   |

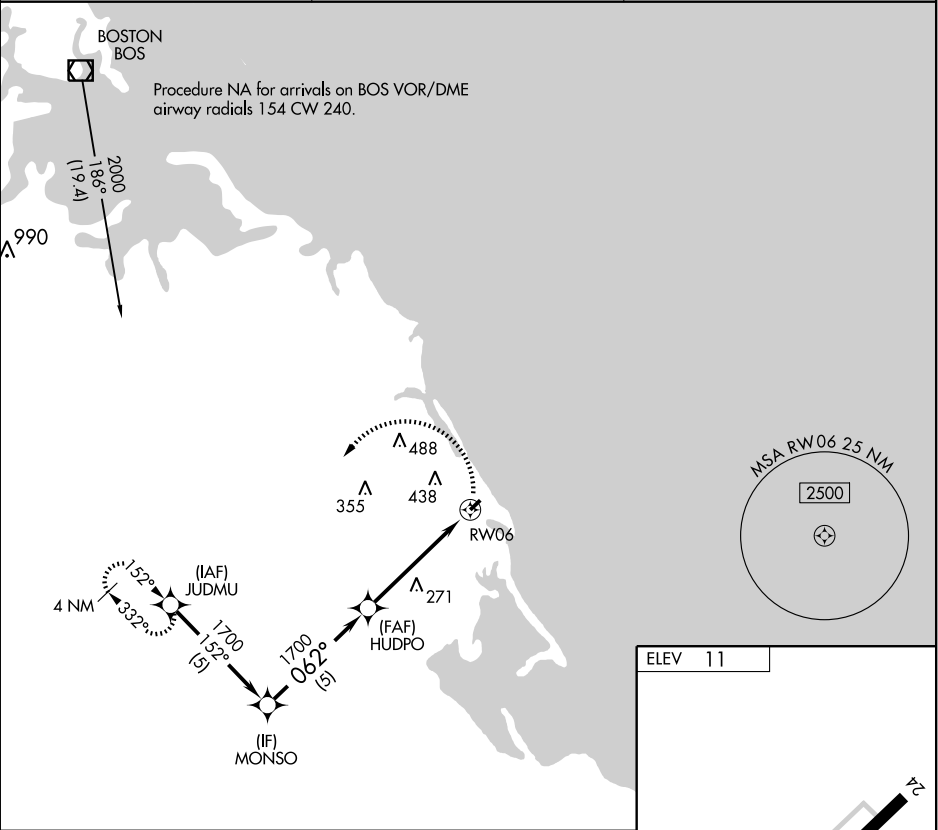
NE-1, 22 OCT 2009 to 19 NOV 2009

|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 3001 |
| 062°    | TDZE     | 9    |
|         | Apt Elev | 11   |

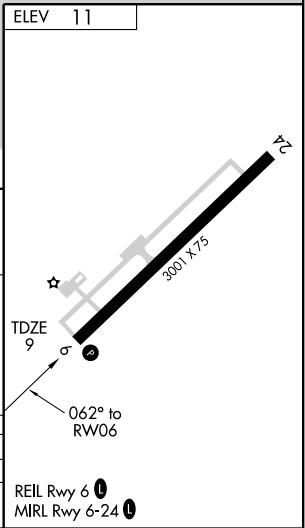
RNAV (GPS) RWY 6  
MARSHFIELD MUNI - GEORGE HARLOW FIELD (GHG)

|  |  |  |
|--|--|--|
| <br> | DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.<br>When local altimeter setting not received, use Plymouth altimeter setting and increase all MDA 60 feet. | MISSED APPROACH: Climbing left turn to 2000 direct JUDMU and hold. |
|--|--|--|

|                 |                         |                          |
|-----------------|-------------------------|--------------------------|
| AWOS-3<br>120.0 | BOSTON APP CON<br>124.1 | UNICOM<br>122.8 (CTAF) 0 |
|-----------------|-------------------------|--------------------------|



|          |   |             |                |       |
|----------|---|-------------|----------------|-------|
|          | MONSO                                   | HUDPO       | 2000           | JUDMU |
|          | 1700                                    | 1700        |                |       |
|          | Procedure Turn NA                       |             |                |       |
|          | VGSi and descent angles not coincident. |             | 1.2 NM to RW06 |       |
|          | 5 NM                                    |             | 3.9 NM         | 1.2   |
| CATEGORY | A                                       | B           | C              | D     |
| LNAV MDA | 540-1                                   | 531 (600-1) | 620-1          | NA    |
| CIRCLING | 560-1                                   | 600-1       | 620-1          | NA    |
|          | 549 (600-1)                             | 609 (700-1) |                |       |



APP CRS  
**242°**

Rwy Idg  
TDZE  
Apt Elev

**3001**  
**9**  
**11**

RNAV (GPS) RWY 24

MARSHFIELD MUNI - GEORGE HARLOW FIELD (GHG)

▼

▲

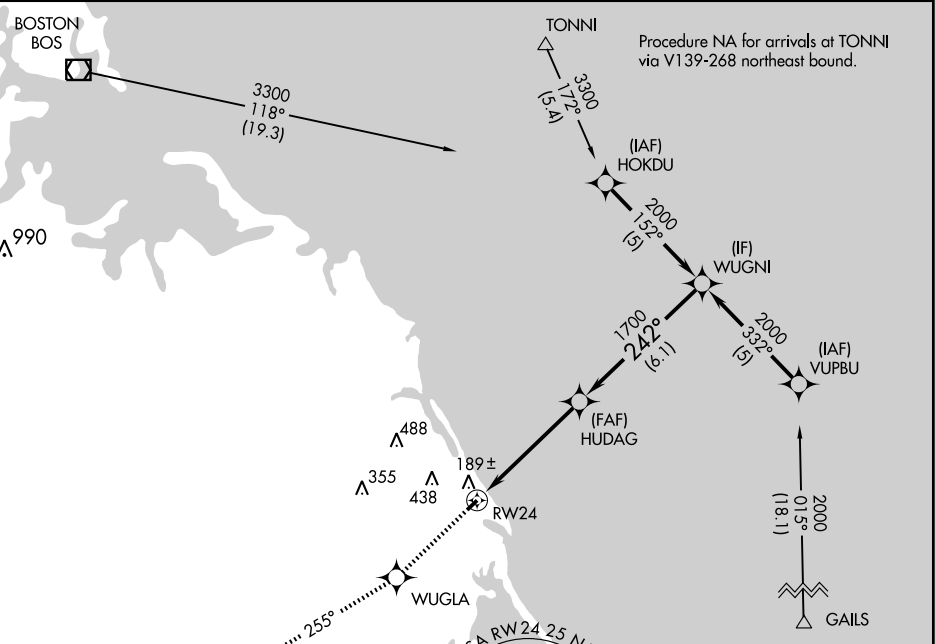
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
When local altimeter setting not received, use Plymouth altimeter setting and increase all MDA 60 feet.




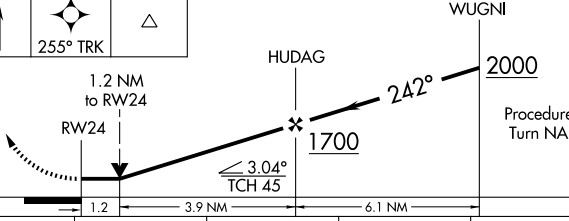
MISSED APPROACH: Climb to 2000 direct WUGLA and via 255° track to BURDY and hold.

AWOS-3  
**120.0**

BOSTON APP CON  
**124.1**

UNICOM  
**122.8** (CTAF) **0**



|  |  |   |    |   |
|--|--|---|----|---|
| 2000   | WUGLA  | BURDY   |    |   |
|   | <br>255° TRK |  |    |   |
|  |  |   |    |   |
| CATEGORY   | A  | B   | C  | D |
| LNAV MDA   | 440-1  | 431 (500-1)   | NA |   |
| CIRCLING   | 560-1  | 620-1   | NA |   |
|  | 549 (600-1)  | 609 (700-1)   |    |   |

REIL Rwy 6 **0**

MIRL Rwy 6-24 **0**

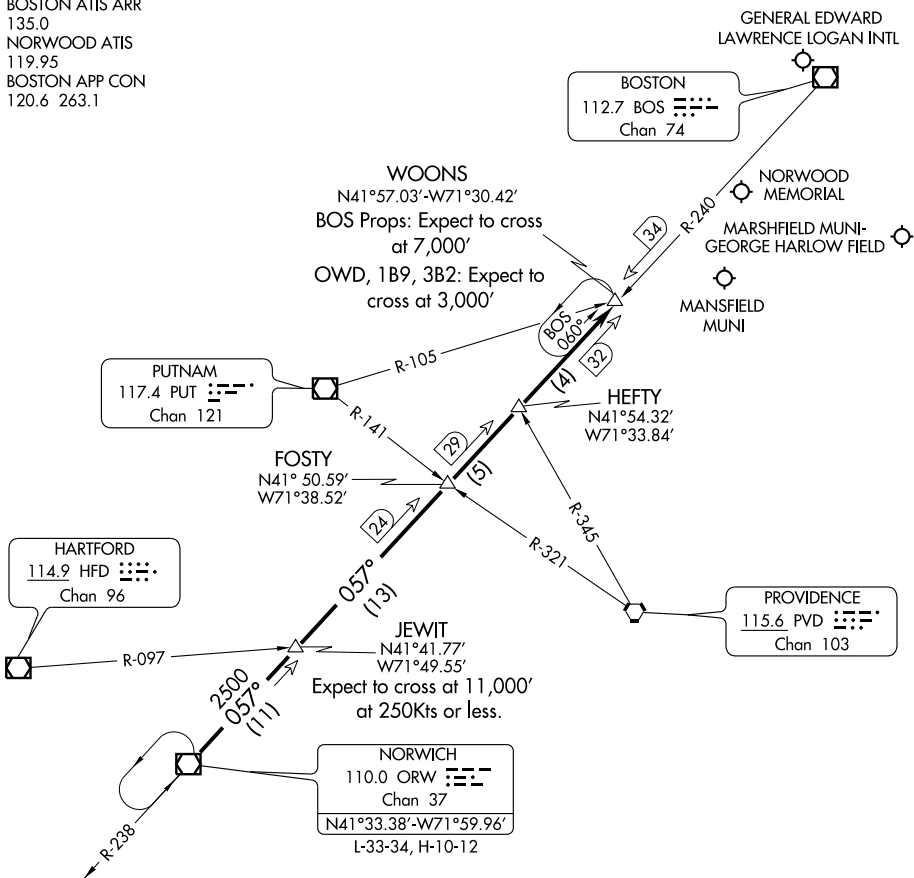
NE-1, 22 OCT 2009 to 19 NOV 2009

## WOONS ONE ARRIVAL

ST-58 (FAA)

BOSTON, MASSACHUSETTS

BOSTON ATIS ARR  
135.0  
NORWOOD ATIS  
119.95  
BOSTON APP CON  
120.6 263.1



NOTE: Chart not to scale

NOTE: Applicable to props landing BOS and all aircraft landing OWD, 1B9 and GHG.  
Applicable 11,000 feet and above.

From over ORW VOR/DME via ORW R-057 to WOONS INT. Expect radar vectors to final.

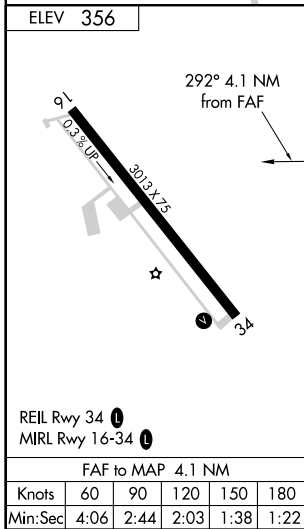
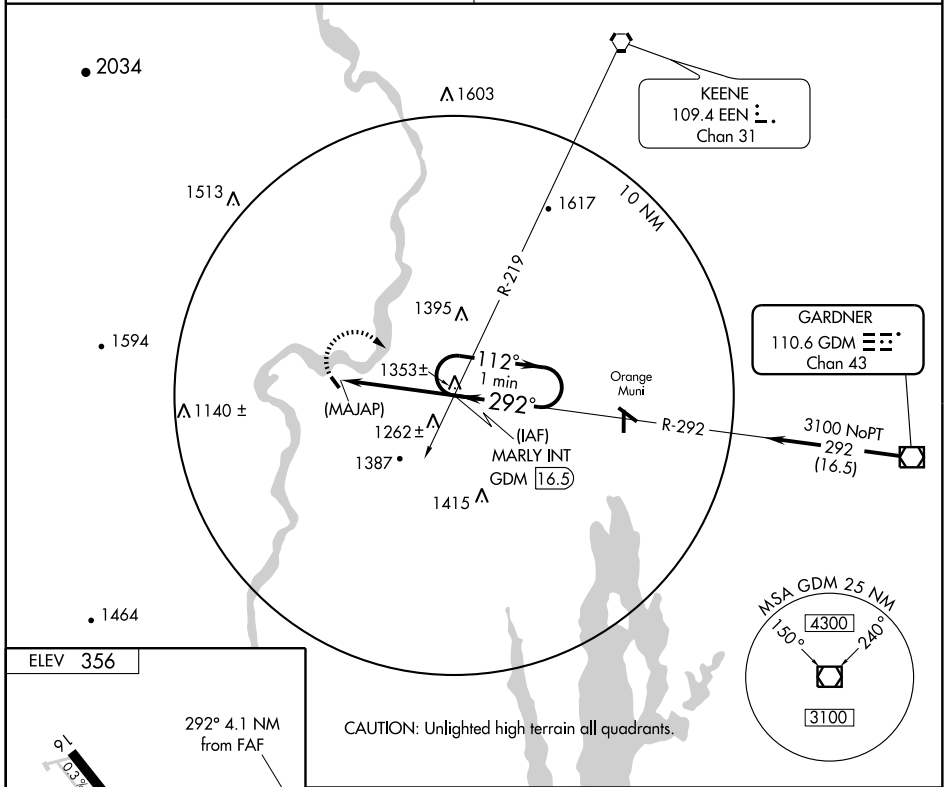
|             |         |              |     |
|-------------|---------|--------------|-----|
| VOR/DME GDM | APP CRS | Rwy Idg TDZE | N/A |
| 110.6       | 292°    |              | N/A |
| Chan 43     |         | Apt Elev     | 356 |

# VOR or GPS-A

MONTAGUE/ TURNERS FALLS (ØB5)

|   |  |
|---|--|
| <p>▼ Obtain local altimeter setting on CTAF; when not received, use Orange altimeter setting.</p> <p>▲ NA</p> | <p>MISSED APPROACH: Climbing right turn to 3100 via GDM R-292 to MARLY Int and hold.</p> |
|---|--|

|  |                                     |
|--|-------------------------------------|
| <p>BOSTON CENTER</p> <p>123.75 338.2</p> | <p>UNICOM</p> <p>123.0 (CTAF) 0</p> |
|--|-------------------------------------|



| 3100                              | MARLY INT                 | MARLY INT GDM 16.5        | One Minute Holding Pattern |    |
|-----------------------------------|---------------------------|---------------------------|----------------------------|----|
| GDM R-292 110.6                   | (MAJAP) GDM 20.6          | 112° → 3100               | ← 292°                     |    |
| 4.1 NM                            |                           |                           |                            |    |
| CATEGORY                          | A                         | B                         | C                          | D  |
| CIRCLING                          | 1520-1¼<br>1164 (1200-1¼) | 1520-1½<br>1164 (1200-1½) | 1520-3<br>1164 (1200-3)    | NA |
| ORANGE ALTIMETER SETTING MINIMUMS |                           |                           |                            |    |
| CIRCLING                          | 1580-1¼<br>1224 (1300-1¼) | 1580-1½<br>1224 (1300-1½) | 1580-3<br>1224 (1300-3)    | NA |



## AIRPORT DIAGRAM

AL-659 (FAA)

NANTUCKET MEMORIAL (ACK)  
NANTUCKET, MASSACHUSETTS

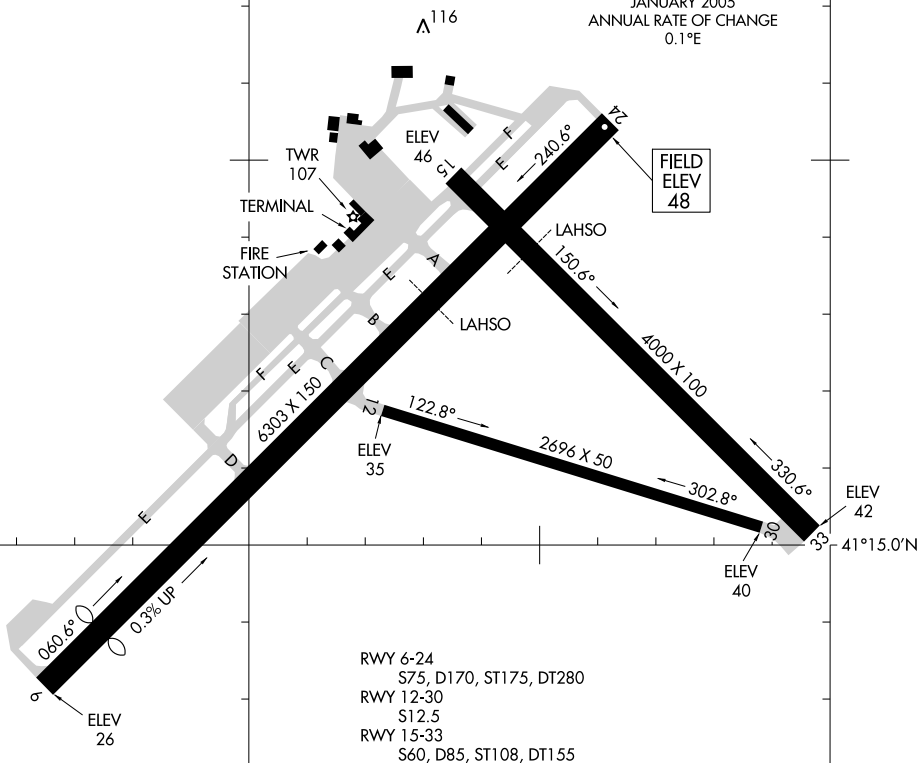
ATIS  
 127.5  
 NANTUCKET TOWER ★  
 118.3  
 GND CON  
 121.7  
 CLNC DEL  
 119.375

D

41°16.0'N

VAR 15.6° W

JANUARY 2005  
 ANNUAL RATE OF CHANGE  
 0.1°E



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
 READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

70°04.0'W

70°03.0'W

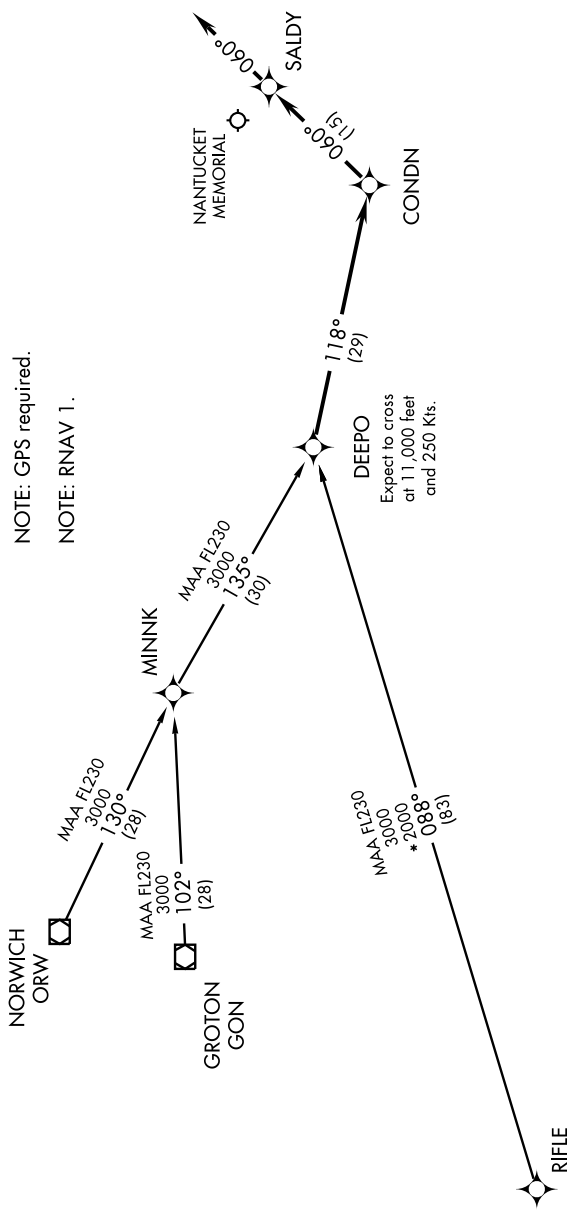
GROTON TRANSITION (GON.DEEPO1)  
NORWICH TRANSITION (ORW.DEEPO1)  
RIFLE TRANSITION (RIFLE.DEEPO1)

CAPE APP CON  
133.75 284.6  
NANTUCKET ATIS  
127.5  
NANTUCKET TOWER  
118.3 (CTAF)

... From DEEPO, via 118° track to CONDN; thence via 060° track to SALDY. Depart SALDY heading 060°, expect radar vectors to final approach course.



NOTE: Radar required.  
NOTE: GPS required.  
NOTE: RNAV 1.



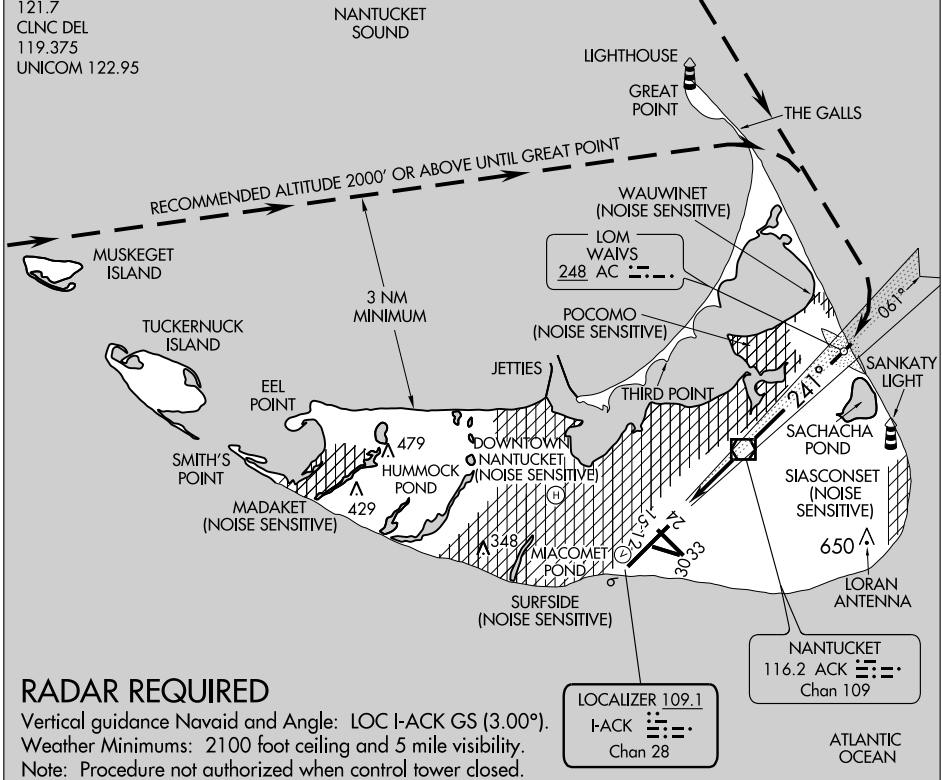
NOTE: Chart not to scale.

# GREAT POINT VISUAL RWY 24

AL-659 (FAA)

NANTUCKET MEMORIAL (ACK)  
NANTUCKET, MASSACHUSETTS

ATIS 127.5  
CAPE APP CON ★  
126.1 318.1  
NANTUCKET TOWER ★  
118.3 (CTAF)  
GND CON  
121.7  
CLNC DEL  
119.375  
UNICOM 122.95



|      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |  |
|------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|--|
| 1 NM | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |  |
|------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|--|

|               |         |          |      |
|---------------|---------|----------|------|
| LOC/DME I-RNE | APP CRS | Rwy Idg  | 5752 |
| 109.1         | 061°    | TDZE     | 39   |
| Chan 28       |         | Apt Elev | 48   |

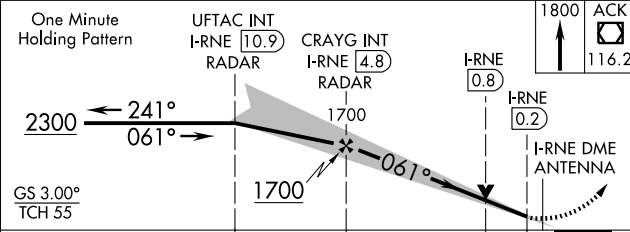
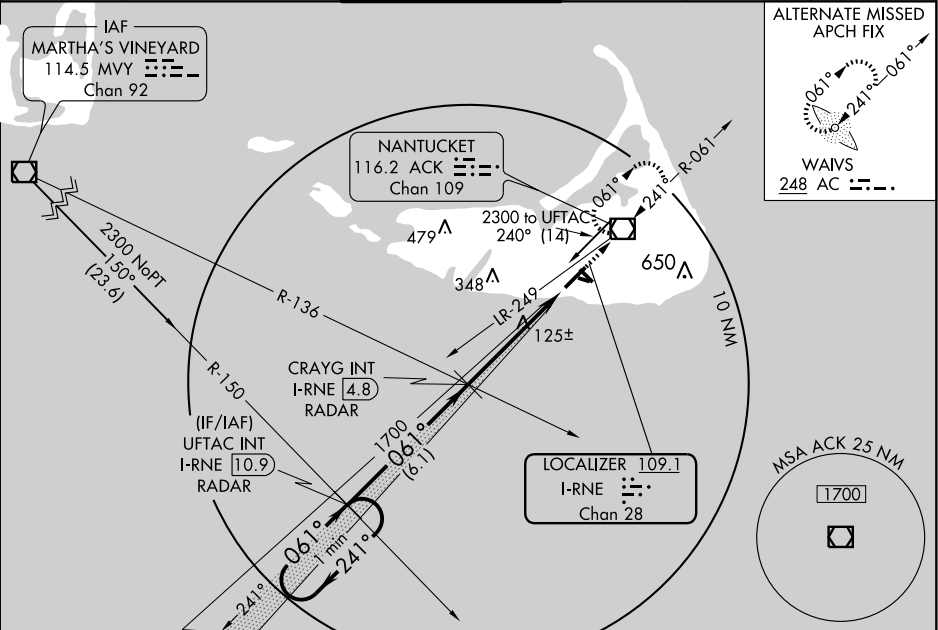
ILS or LOC RWY 6  
NANTUCKET MEMORIAL (ACK)

**⚠** When local altimeter setting not received, use Hyannis altimeter setting and increase all DA 63 feet and all MDA 80 feet; increase S-ILS 6 all Cats visibility to RVR 5000 and S-LOC Cats C and D visibility to RVR 6000. VDP NA when using Hyannis altimeter setting. Inoperative table does not apply to S-LOC 6 Cat C when using Hyannis altimeter setting.

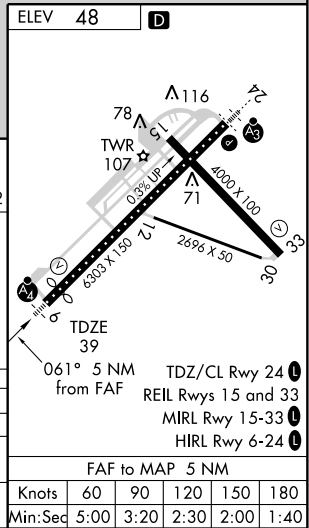
**MALSF**

**MISSED APPROACH:** Climb to 1800 direct ACK VOR/DME and hold, continue climb-in-hold to 1800.

|               |                              |                                    |                  |                     |                  |
|---------------|------------------------------|------------------------------------|------------------|---------------------|------------------|
| ATIS<br>127.5 | CAPE APP CON*<br>126.1 318.1 | NANTUCKET TOWER*<br>118.3 (CTAF) 0 | GND CON<br>121.7 | CLNC DEL<br>119.375 | UNICOM<br>122.95 |
|---------------|------------------------------|------------------------------------|------------------|---------------------|------------------|



| CATEGORY | A                  | B                 | C                   | D                  |
|----------|--------------------|-------------------|---------------------|--------------------|
| S-ILS 6  | 239/40 200 (200-¾) |                   |                     |                    |
| S-LOC 6  | 380/40 341 (400-¾) |                   |                     | 380/50 341 (400-1) |
| CIRCLING | 440-1 392 (400-1)  | 500-1 452 (500-1) | 500-1½ 452 (500-1½) | 600-2 552 (600-2)  |



|               |         |          |      |
|---------------|---------|----------|------|
| LOC/DME I-ACK | APP CRS | Rwy Idg  | 6303 |
| 109.1         | 241°    | TDZE     | 48   |
| Chan 28       |         | Apt Elev | 48   |

ILS or LOC RWY 24

NANTUCKET MEMORIAL (ACK)

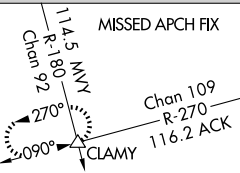
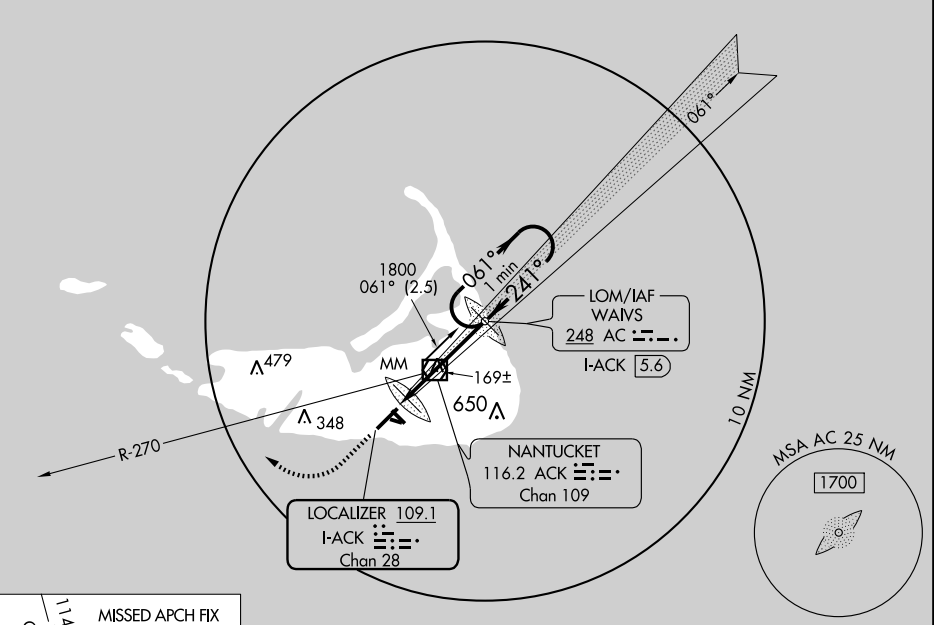
When local altimeter setting not received, use Hyannis altimeter setting and increase all DA to 63 feet and all MDA 80 feet; increase S-LOC 24 Cat C visibility to RVR 4000 and Cat D visibility to RVR 5000. VDP NA when using Hyannis altimeter setting. For inoperative SSALR when using Hyannis altimeter setting, increase S-ILS 24 visibility to RVR 5000. ADF or DME Required.

SSALR

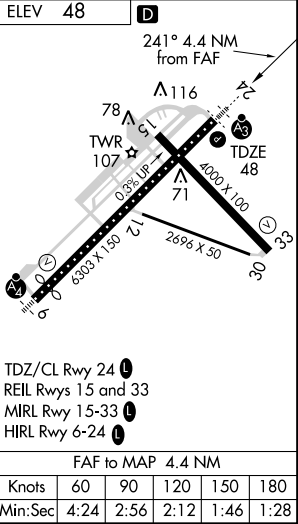


MISSED APPROACH: Climb to 700 then climbing right turn to 2500 via heading 310° and ACK VOR/DME R-270 to CLAMY Int and hold.

|       |                |                   |         |          |        |
|-------|----------------|-------------------|---------|----------|--------|
| ATIS  | CAPE APP CON * | NANTUCKET TOWER * | GND CON | CLNC DEL | UNICOM |
| 127.5 | 126.1 318.1    | 118.3 (CTAF) 0    | 121.7   | 119.375  | 122.95 |



|          |             |             |              |             |              |                            |  |
|----------|-------------|-------------|--------------|-------------|--------------|----------------------------|--|
|          | 700         | 2500        | ACK          | CLAMY       | LOM          |                            |  |
|          |             | hdg 310°    | R-270 116.2  | Δ           | I-ACK 5.6    | One Minute Holding Pattern |  |
|          |             |             |              |             | MM I-ACK 1.6 |                            |  |
|          |             |             |              |             | I-ACK 2.1    |                            |  |
|          |             |             |              |             | I-ACK 1.1    |                            |  |
|          |             |             |              |             | 1525         |                            |  |
|          |             |             |              |             | 061°         |                            |  |
|          |             |             |              |             | 241°         |                            |  |
|          |             |             |              |             | 1800         |                            |  |
|          |             |             |              |             | 1600         |                            |  |
|          |             |             |              |             | GS 3.00°     |                            |  |
|          |             |             |              |             | TCH 47       |                            |  |
| CATEGORY | A           | B           | C            | D           |              |                            |  |
| S-ILS 24 |             | 248/18      | 200 (200-½)  |             |              |                            |  |
| S-LOC 24 |             | 420/24      | 372 (400-½)  | 420/40      |              |                            |  |
|          |             |             |              | 372 (400-¾) |              |                            |  |
| CIRCLING | 440-1       | 500-1       | 500-1½       | 600-2       |              |                            |  |
|          | 392 (400-1) | 452 (500-1) | 452 (500-1½) | 552 (600-2) |              |                            |  |

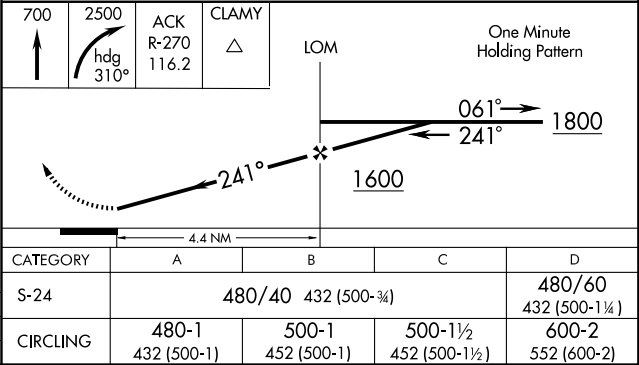
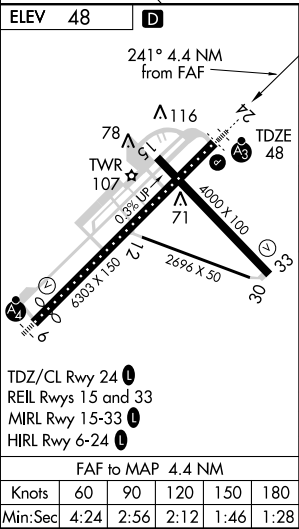
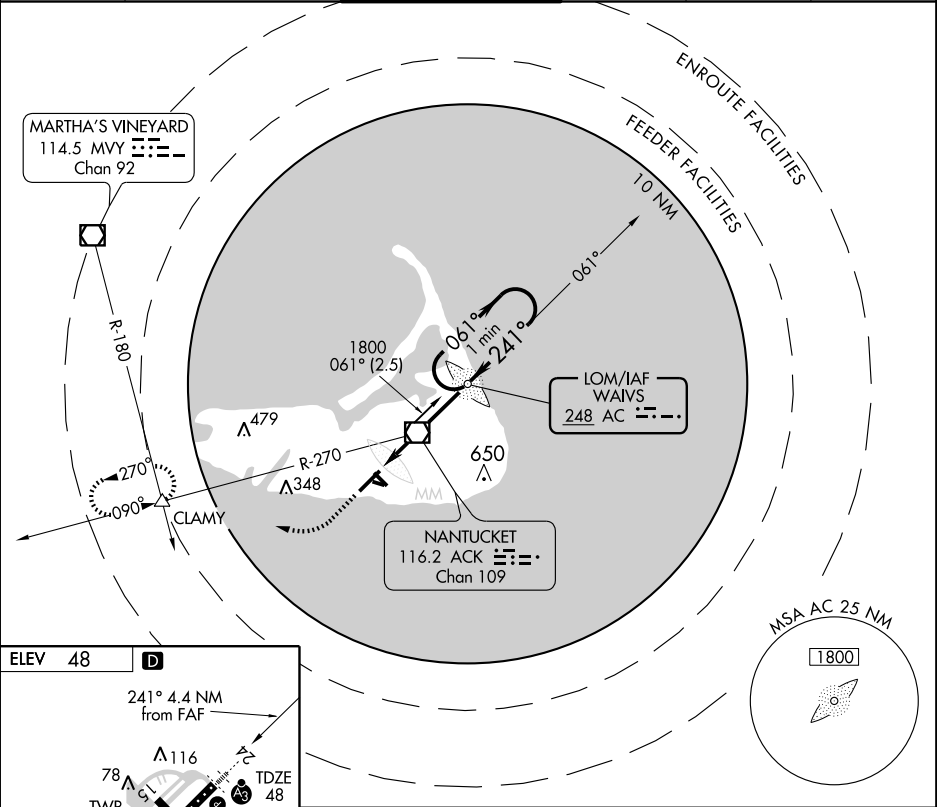


|             |         |          |      |
|-------------|---------|----------|------|
| ACK VOR/DME | APP CRS | Rwy Idg  | 6303 |
| 116.2       | 241°    | TDZE     | 48   |
| Chan 109    |         | Apt Elev | 48   |

NDB RWY 24  
NANTUCKET MEMORIAL (ACK)

|   |       |  |
|---|-------|--|
| <p>▼ If local altimeter setting not received, use Hyannis altimeter setting and increase all MDAs 80 feet.</p> <p>▲</p> | SSALR | MISSED APPROACH: Climb to 700 then climbing right turn to 2500 via heading 310° and ACK VOR/DME R-270 to CLAMY Int and hold. |
|---|-------|--|

|               |                               |                                     |                  |                     |                  |
|---------------|-------------------------------|-------------------------------------|------------------|---------------------|------------------|
| ATIS<br>127.5 | CAPE APP CON ★<br>126.1 318.1 | NANTUCKET TOWER ★<br>118.3 (CTAF) 0 | GND CON<br>121.7 | CLNC DEL<br>119.375 | UNICOM<br>122.95 |
|---------------|-------------------------------|-------------------------------------|------------------|---------------------|------------------|





## ARRIVAL DESCRIPTION

GROTON TRANSITION (GON.NEWBE1): From over GON VOR/DME via GON R-128 to TRAIT INT, then via SEY R-310 to SEY VOR/DME, then via SEY R-099 to NEWBE INT. Thence . . . .

HAMPTON TRANSITION (HTO.NEWBE1): From over HTO VORTAC via HTO R-079 to JORDN INT, then via SEY R-261 to SEY VOR/DME, then via SEY R-099 to NEWBE INT. Thence . . . .

PROVIDENCE TRANSITION (PVD.NEWBE1): From over PVD VORTAC via PVD R-167 to NEWBE INT. Thence . . . .

. . . . From over NEWBE INT via ORW R-130 to DEEPO INT, then via the ACK R-270 to CLAMY INT (MEA 3000). After CLAMY INT, expect radar vectors to the final approach course.



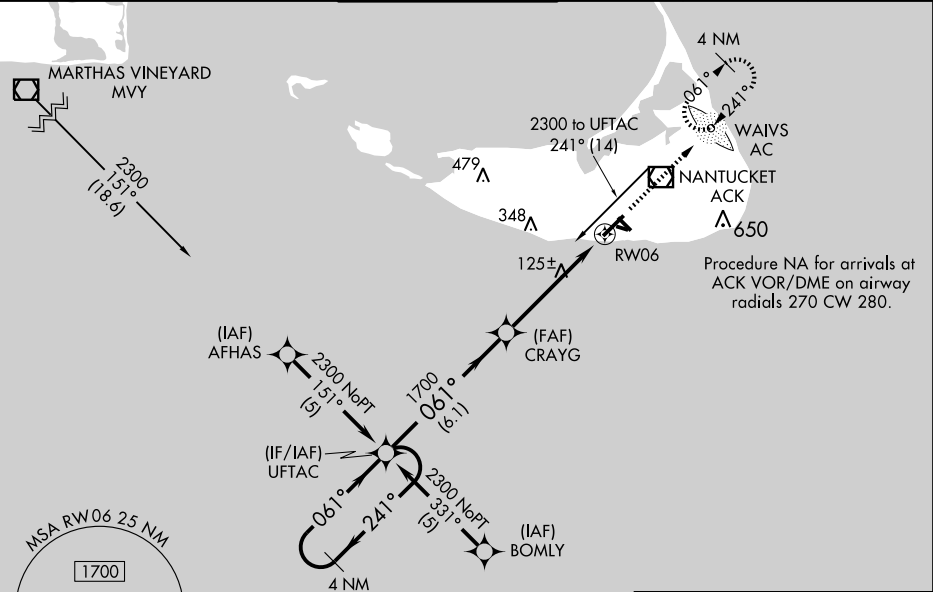
|  |                        |                             |                                       |
|--|------------------------|-----------------------------|---------------------------------------|
| WAAS<br>CH <b>81912</b><br><b>W06A</b> | APP CRS<br><b>061°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>5752</b><br><b>39</b><br><b>48</b> |
|--|------------------------|-----------------------------|---------------------------------------|

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.5°C (5°F) or above 48°C (118°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Hyannis altimeter setting and increase all DA 63 feet and all MDA 80 feet; increase LPV all Cats visibility to RVR 5000, LNAV/VNAV all Cats and LNAV Cats C and D visibility to RVR 6000. Baro-VNAV and VDP NA when using Hyannis altimeter setting. Inoperative table does not apply to LNAV/VNAV all Cats, and LNAV Cat C when using Hyannis altimeter setting.

MALSF

MISSED APPROACH:  
Climb to 1800 direct  
WAIVS LOM and  
hold.

|                      |                                      |  |                         |                            |                         |
|----------------------|--------------------------------------|--|-------------------------|----------------------------|-------------------------|
| ATIS<br><b>127.5</b> | CAPE APP CON ★<br><b>126.1 318.1</b> | NANTUCKET TOWER ★<br><b>118.3 (CTAF) 0</b> | GND CON<br><b>121.7</b> | CLNC DEL<br><b>119.375</b> | UNICOM<br><b>122.95</b> |
|----------------------|--------------------------------------|--|-------------------------|----------------------------|-------------------------|



ELEV 48

D

4 NM Holding Pattern

UFTAC

CRAYG

1800

AC

GS 3.00° TCH 55

2300

341°

061°

061°

1700

6.1 NM

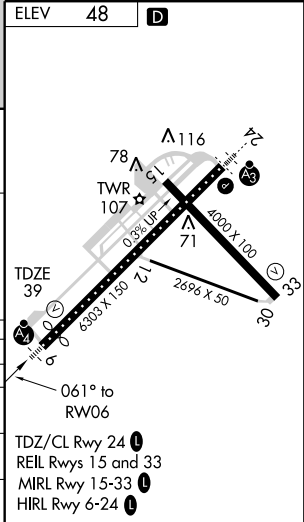
4.1 NM

0.9 NM

\* 0.9 NM to RW06

\* LNAV only.

| CATEGORY     | A                  | B                 | C                   | D                 |
|--------------|--------------------|-------------------|---------------------|-------------------|
| LPV DA       | 239/40             |                   | 200 (200-¾)         |                   |
| LNAV/VNAV DA | 352/40 313 (400-¾) |                   | 352/50 313 (400-1)  |                   |
| LNAV MDA     | 380/40 341 (400-¾) |                   | 380/50 341 (400-1)  |                   |
| CIRCLING     | 440-1 392 (400-1)  | 500-1 452 (500-1) | 500-1½ 452 (500-1½) | 600-2 552 (600-2) |



NE-1, 22 OCT 2009 to 19 NOV 2009

|  |                        |                             |                                       |
|--|------------------------|-----------------------------|---------------------------------------|
| WAAS<br>CH <b>93612</b><br><b>W24A</b> | APP CRS<br><b>241°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>6303</b><br><b>48</b><br><b>48</b> |
|--|------------------------|-----------------------------|---------------------------------------|

RNAV (GPS) RWY 24  
NANTUCKET MEMORIAL (ACK)

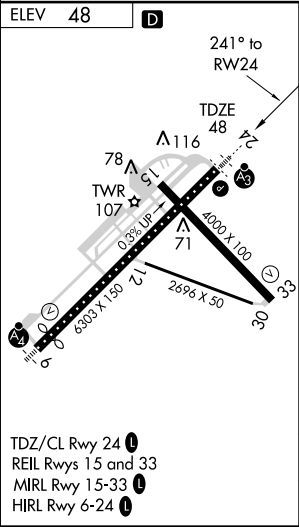
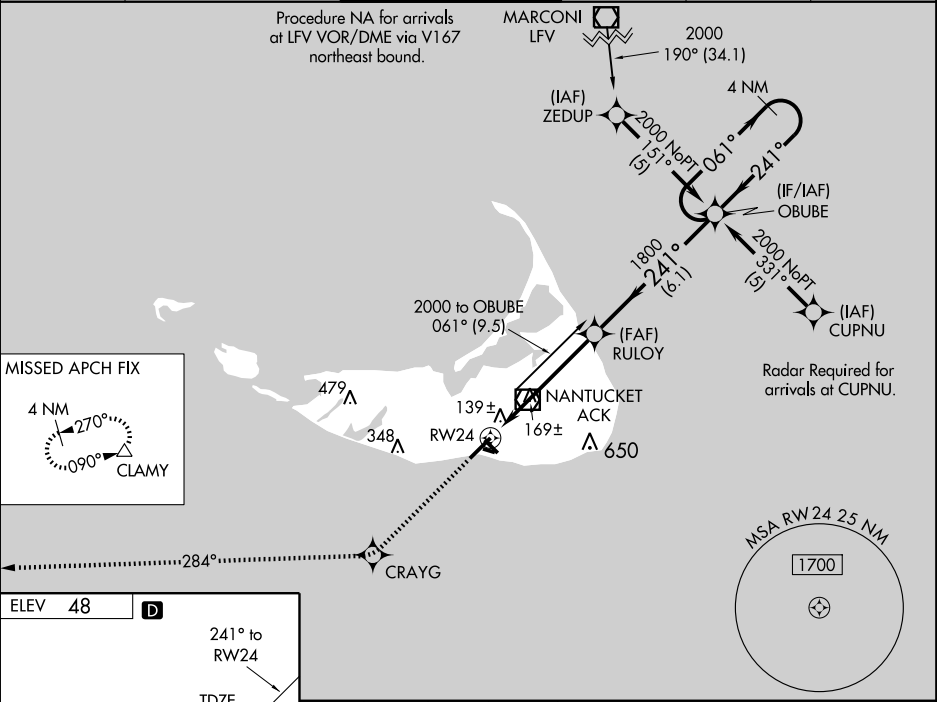
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 49°C (120°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Hyannis altimeter setting and increase all DA 63 feet and all MDA 80 feet; increase LNAV/VNAV all Cats and LNAV Cat C visibility ¼ mile. Baro-VNAV and VDP NA when using Hyannis altimeter setting. For inoperative SSALR, increase LNAV Cat D visibility to RVR 6000. For inoperative SSALR when using Hyannis altimeter setting, increase LPV all Cats visibility to RVR 5000.

SSALR



MISSED APPROACH:  
Climb to 2500 direct  
CRAYG and via 284°  
track to CLAMY and  
hold.

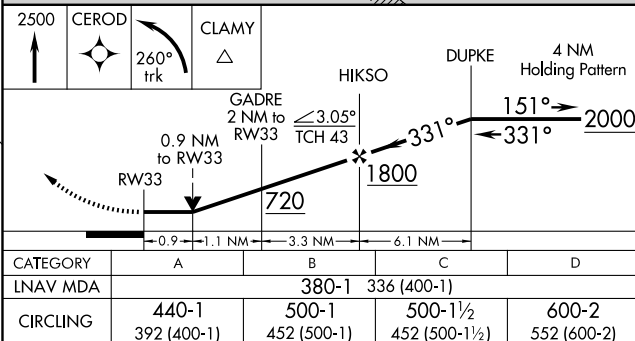
|                      |                                      |  |                         |                            |                         |
|----------------------|--------------------------------------|--|-------------------------|----------------------------|-------------------------|
| ATIS<br><b>127.5</b> | CAPE APP CON ★<br><b>126.1 318.1</b> | NANTUCKET TOWER ★<br><b>118.3 (CTAF) 0</b> | GND CON<br><b>121.7</b> | CLNC DEL<br><b>119.375</b> | UNICOM<br><b>122.95</b> |
|----------------------|--------------------------------------|--|-------------------------|----------------------------|-------------------------|



|              |                      |                      |                        |                       |                      |
|--------------|----------------------|----------------------|------------------------|-----------------------|----------------------|
| 2500         | CRAYG                | 284° track           | CLAMY                  | OBUBE                 | 4 NM Holding Pattern |
| *LNAV only.  |                      | *1 NM to RWY 24      |                        |                       |                      |
|              | RWY 24               |                      |                        |                       |                      |
|              | 1 NM                 | 4.3 NM               | 6.1 NM                 |                       |                      |
| CATEGORY     | A                    | B                    | C                      | D                     |                      |
| LPV DA       | 248/24               | 200 (200-½)          |                        |                       |                      |
| LNAV/VNAV DA | 435/40               | 387 (400-¾)          |                        |                       |                      |
| LNAV MDA     | 420/24               | 372 (400-½)          |                        | 420/50<br>372 (400-1) |                      |
| CIRCLING     | 440-1<br>392 (400-1) | 500-1<br>452 (500-1) | 500-1½<br>452 (500-1½) | 600-2<br>552 (600-2)  |                      |

RNAV (GPS) RWY 33  
NANTUCKET MEMORIAL (ACK)

**MISSED APPROACH:** Climb to 2500 direct CEROD and left turn via 260° track to CLAMY and hold.

UNICOM  
122.95

## STEWY ONE DEPARTURE (RNAV)

ATIS 127.5  
GND CON  
121.7  
CLNC DEL  
119.375  
NANTUCKET TOWER ★  
118.3  
CAPE DEP CON  
133.75 284.6  
BOSTON CENTER  
132.225 128.8 257.8  
ASOS

PEASE  
PSM  


SCUPP  
△

TAKE-OFF MINIMUMS:

Rwy 6: STANDARD.


Rwys 12, 15, 24, 30, 33: NA-Noise abatement.

CHESTER  
CTR 

BOSTON  
BOS  


MARCONI  
LFV  


BARNES  
BAF  


PROVIDENCE  
PVD  


GAILS  
△


NOTE: 1. GPS Required  
2. RNAV 1.

COSSY  
△

HAMPTON  
HTO  


SANDY POINT  
SEY  


PEAKE  
△

MARTHA'S VINEYARD  
MVY  


TRURO  
△  
1300  
027°  
(38)

STEWY

2000  
\* 1400  
280°  
(29)

TOPPY  
△

PEVTE  
△

TAKE-OFF OBSTACLES:

Rwy 6: Obstruction light 978 feet from DER, 636 feet left of centerline,  
14 feet AGL/73 feet MSL,  
Trees, 1827 feet from DER, 480 feet right of centerline, 15 feet  
AGL/75 feet MSL,  
Multiple trees beginning 3586 feet from DER, 1134 feet left of centerline  
up to 60 feet AGL/139 feet MSL.

NOTE: Chart not to scale.

NE-1, 22 OCT 2009 to 19 NOV 2009

## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 6: Climb to 2000 direct PEVTE, direct TOPPY, then via 360° track to STEWY, thence. . .  
. . .via transition/route or assigned fix. Expect filed altitude 10 minutes after departure.

TRURO TRANSITION (STEWY1.TRURO): From over STEWY INT via 027° track to TRURO INT.

MVY TRANSITION (STEWY1.MVY): From over STEWY INT via 280° track to MVY VOR/DME.

# TUCKERNUCK VISUAL RWY 6

AL-659 (FAA)

NANTUCKET MEMORIAL (ACK)  
NANTUCKET, MASSACHUSETTS

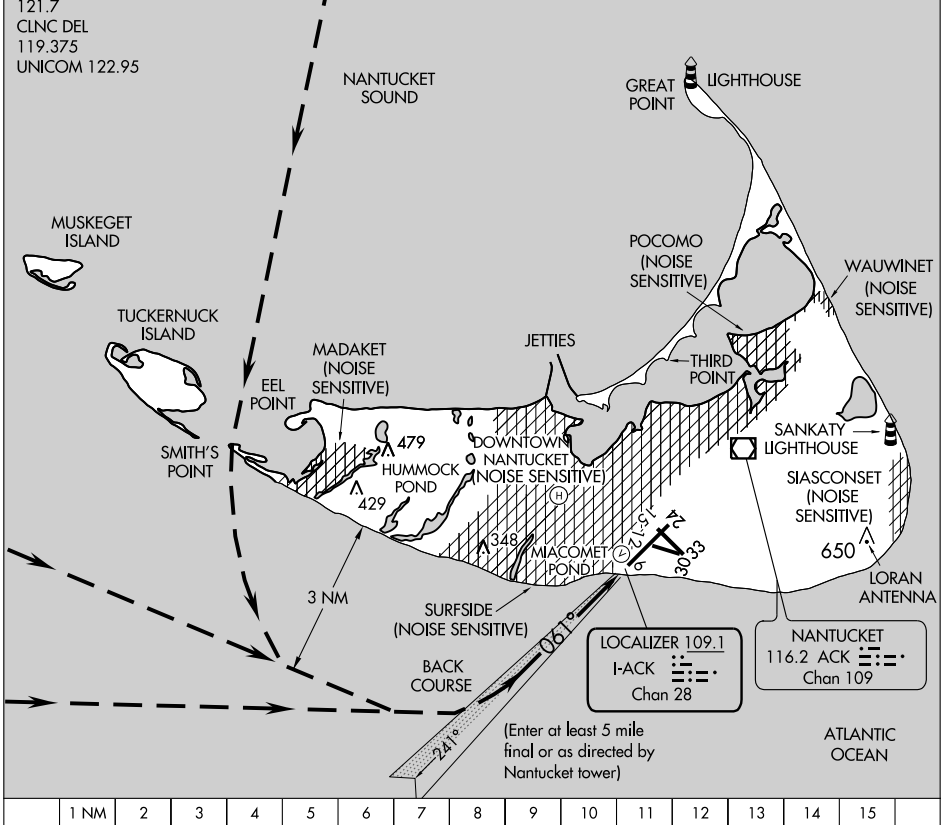
ATIS 127.5  
CAPE APP CON ★  
126.1 318.1  
NANTUCKET TOWER ★  
118.3 (CTAF)  
GND CON  
121.7  
CLNC DEL  
119.375  
UNICOM 122.95

## RADAR REQUIRED

Vertical guidance visual aid: VASI

Weather Minimums: 2100 foot ceiling and 5 mile visibility.

Note: Procedure not authorized when control tower closed.



|      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |  |
|------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|--|
| 1 NM | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |  |
|------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|--|


|  |                        |   |
|--|------------------------|---|
| ACK VOR/DME<br><b>116.2</b><br>Chan <b>109</b> | APP CRS<br><b>240°</b> | Rwy Idg <b>6303</b><br>TDZE <b>48</b><br>Apt Elev <b>48</b> |
|--|------------------------|---|

VOR RWY 24

NANTUCKET MEMORIAL (ACK)

**T** When local altimeter setting not received, use Hyannis altimeter setting and increase all MDA 80 feet; increase S-24 Cat C visibility to RVR 4000. VDP NA when using Hyannis altimeter setting. For Inoperative SSALR, increase S-24 Cat D visibility to RVR 6000.

SSALR

 MISSED APPROACH: Climb to 700 then climbing right turn to 2500 via heading 310° and ACK VOR/DME R-270 to CLAMY INT/ACK 23.9 DME and hold.

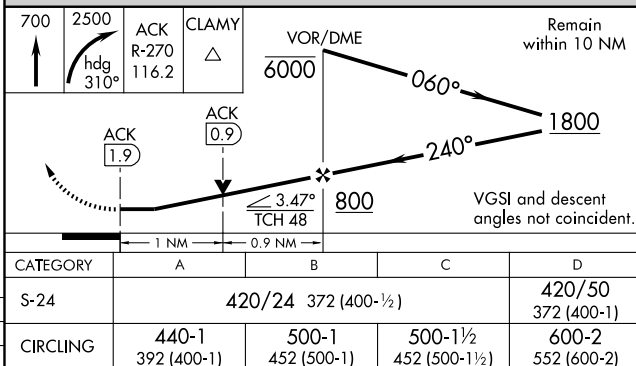
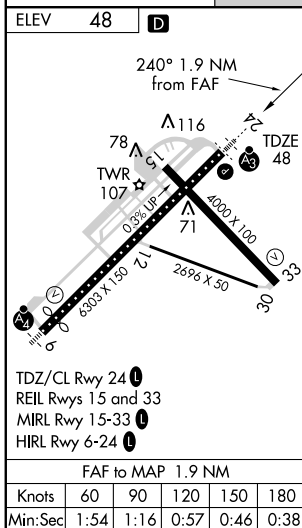
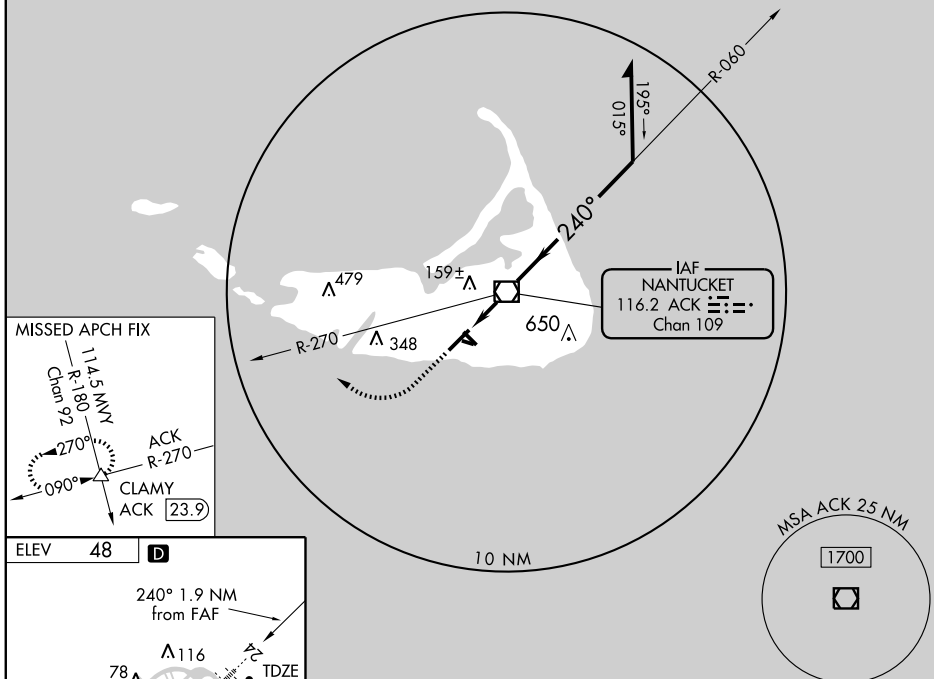
ATIS  
**127.5**

CAPE APP CON ★  
126.1 318.1

NANTUCKET TOWER ★  
118.3 (CTAF) **L**

GND CON  
121.7

CLNC DEL  
**119,375**

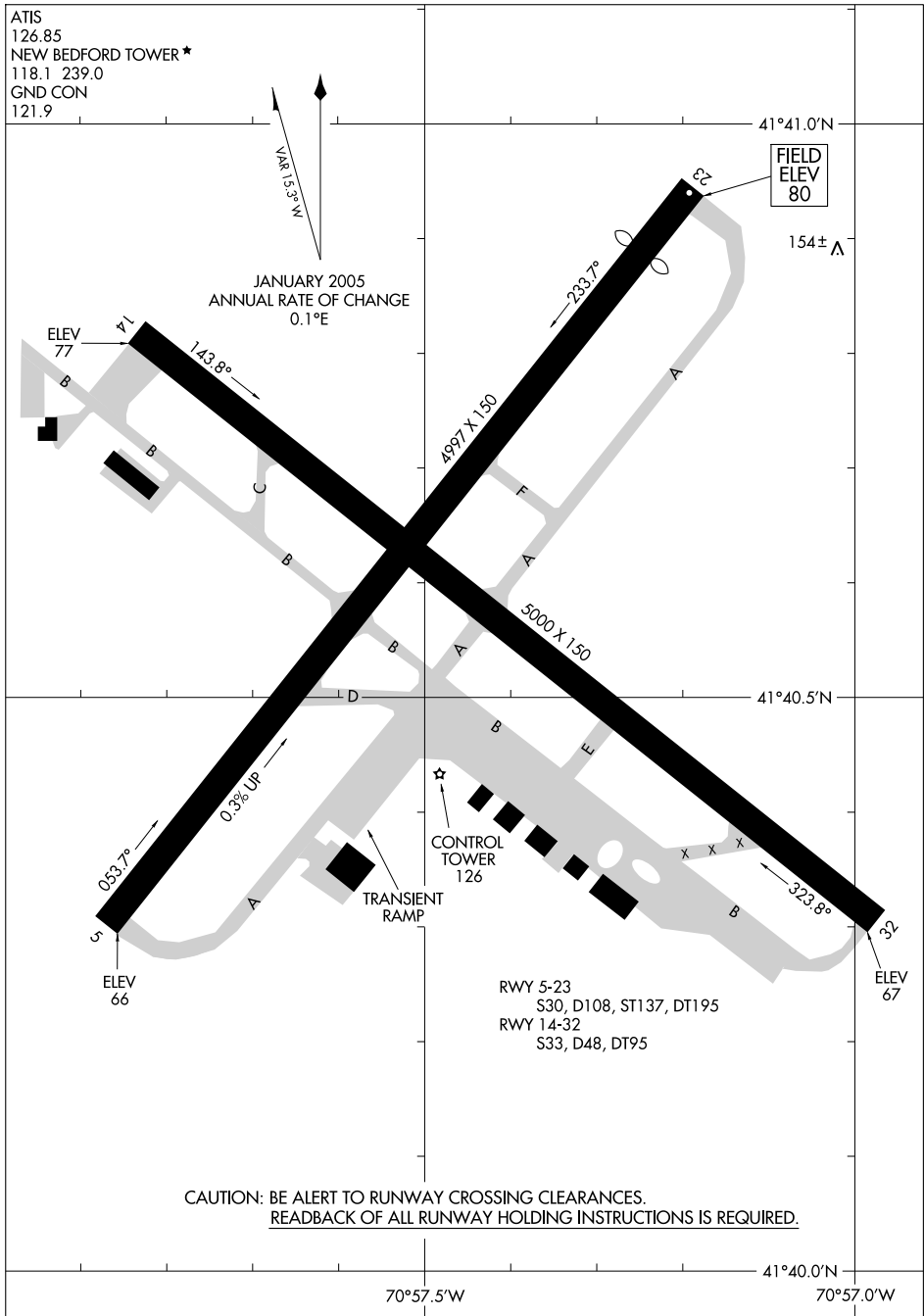
UNICOM  
122.95

## AIRPORT DIAGRAM

AL-644 (FAA)

NEW BEDFORD RGNL (EWB)  
NEW BEDFORD, MASSACHUSETTS

ATIS  
126.85  
NEW BEDFORD TOWER ★  
118.1 239.0  
GND CON  
121.9



NE-1, 22 OCT 2009 to 19 NOV 2009

|                |             |          |             |
|----------------|-------------|----------|-------------|
| LOC/DME I-EWB  | APP CRS     | Rwy Idg  | <b>4997</b> |
| <u>109.7</u>   | <b>054°</b> | TDZE     | <b>72</b>   |
| Chan <b>34</b> |             | Apt Elev | <b>80</b>   |

ILS or LOC RWY 5  
NEW BEDFORD RGNL (EWB)



Auto coupled approach NA below 470.  
ADF required.



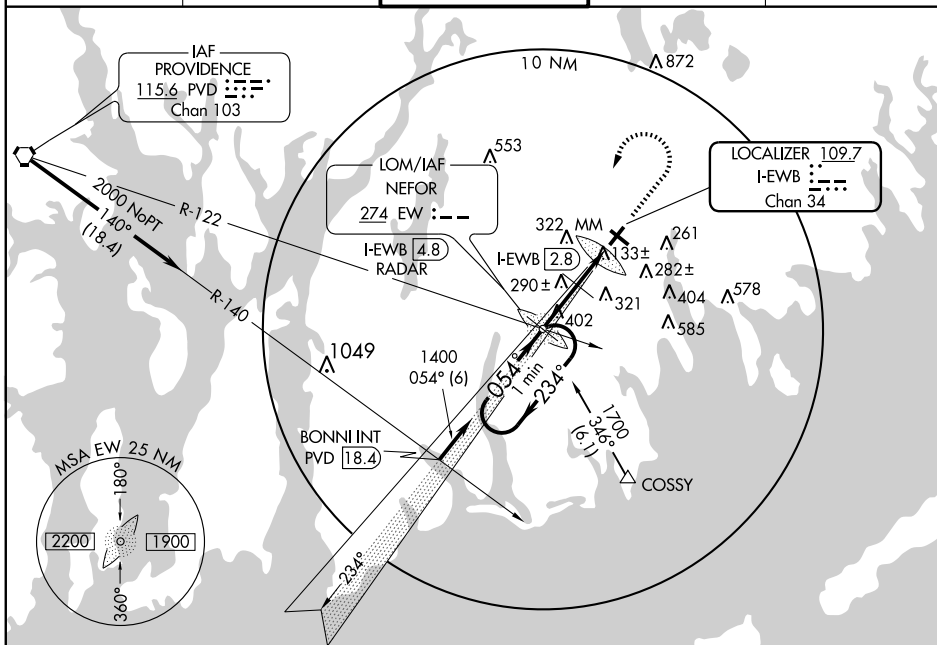
**MISSED APPROACH:** Climb to 700, then climbing left turn to 1700 direct NEFOR LOM and hold.

ATIS  
126.85

PROVIDENCE APP CON★  
128.7 269.525

NEW BEDFORD TOWER★  
118.1 (CTAF) **L** 239.0

GND CON  
**121.9**

UNICOM  
122.95

## One Minute Holding Pattern

1700 ← 234°  
054° → 1500  
GS 3.00°  
TCH 38 \* LOC only

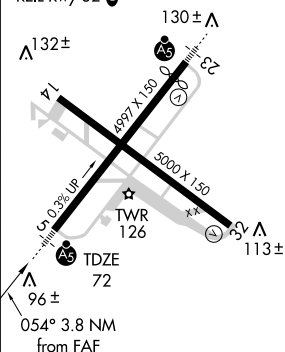
LOM  
I-EWB 4.8  
RADAR

700  
↑

1700

ELEV 80

MIRL Rwy 14-32 **L**  
HIRL Rwy 5-23 **L**  
REIL Rwy 32 **L**



| CATEGORY     | A                  | B                      | C                      | D |
|--------------|--------------------|------------------------|------------------------|---|
| S-ILS 5      | 272/24 200 (200-½) |                        |                        |   |
| S-LOC 5      | 720/24 648 (700-½) | 720/60<br>648 (700-¾)  | 720-1½<br>648 (700-1½) |   |
| CIRCLING     | 720-1 640 (700-1)  | 720-1¾<br>640 (700-1¾) | 720-2<br>640 (700-2)   |   |
| DME MINIMUMS |                    |                        |                        |   |
| S-LOC 5      | 420/24 348 (400-½) | 420/40<br>348 (400-¾)  |                        |   |
| CIRCLING     | 620-1 540 (600-1)  | 640-1½<br>560 (600-1½) | 640-2<br>560 (600-2)   |   |

| FAF to MAP 3.8 NM |      |      |      |      |      |
|-------------------|------|------|------|------|------|
| Knots             | 60   | 90   | 120  | 150  | 180  |
| Min:Sec           | 3:48 | 2:32 | 1:54 | 1:31 | 1:16 |

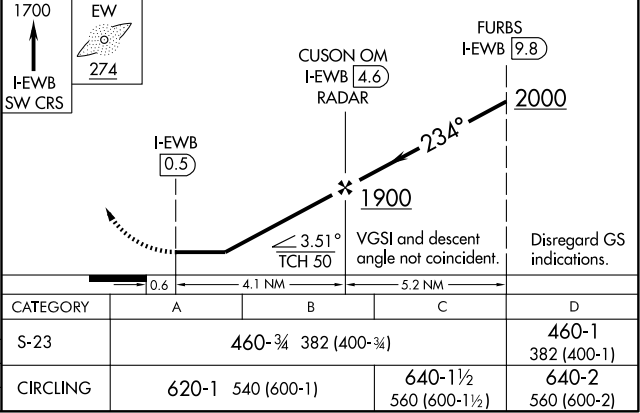
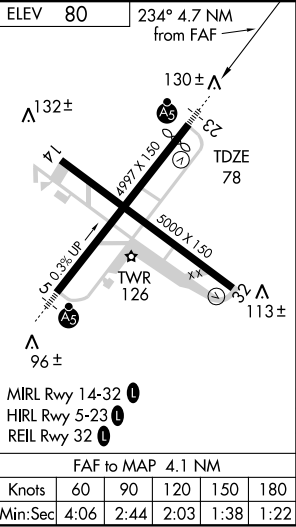
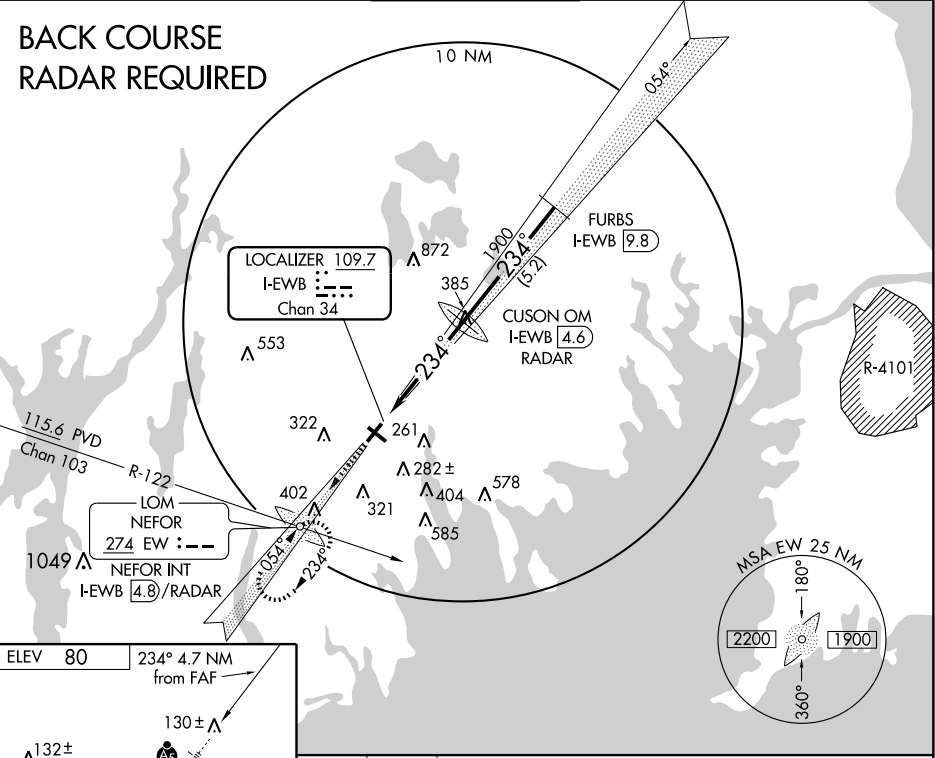


|               |         |          |      |
|---------------|---------|----------|------|
| LOC/DME I-EWB | APP CRS | Rwy Idg  | 4584 |
| 109.7         | 234°    | TDZE     | 78   |
| Chan 34       |         | Apt Elev | 80   |

LOC BC RWY 23  
NEW BEDFORD RGNL (E WB)

|  |   |
|--|---|
|  For inoperative MALSR, increase S-23 visibility ¼ mile all Cats. |  MISSED APPROACH: Climb to 1700 via I-EWB SW course to NEFOR LOM/Int/I-EWB 4.8 DME/RADAR and hold. |
|--|---|

|                |                                      |  |                  |                  |
|----------------|--------------------------------------|--|------------------|------------------|
| ATIS<br>126.85 | PROVIDENCE APP CON*<br>128.7 269,525 | NEW BEDFORD TOWER*<br>118.1 (CTAF) 0 239.0 | GND CON<br>121.9 | UNICOM<br>122.95 |
|----------------|--------------------------------------|--|------------------|------------------|

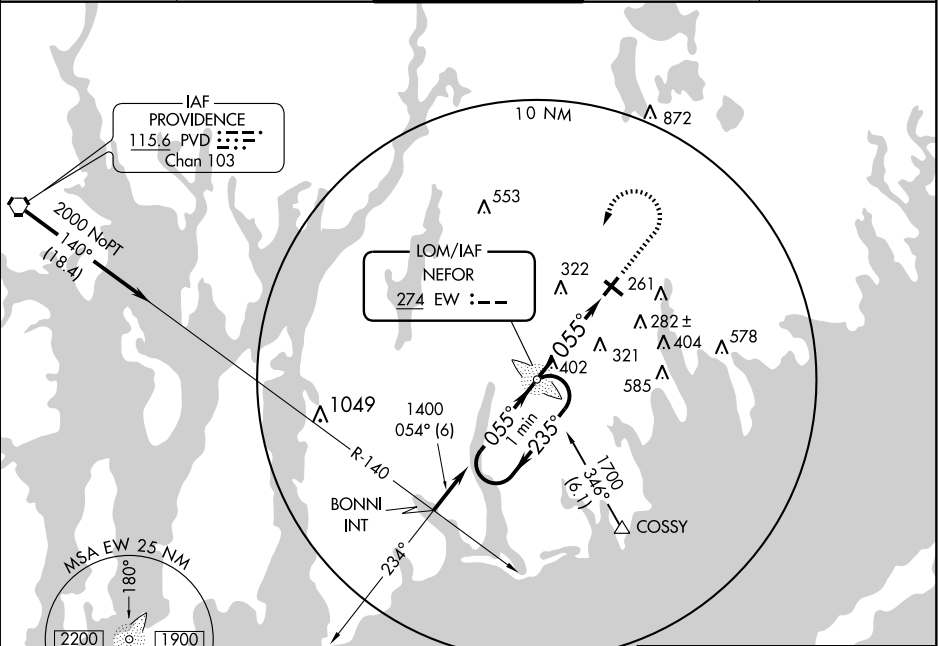


|            |             |          |      |
|------------|-------------|----------|------|
| LOM EW     | APP CRS     | Rwy Idg  | 4997 |
| <u>274</u> | <u>055°</u> | TDZE     | 72   |
|            |             | Apt Elev | 80   |

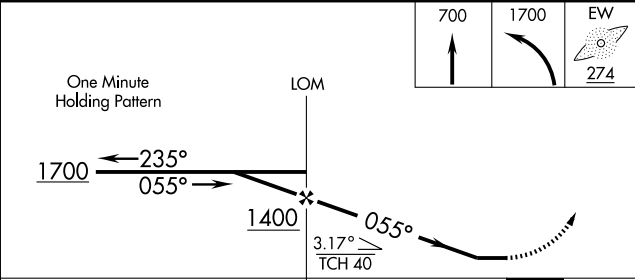
NDB RWY 5  
NEW BEDFORD RGNL (E'WB)

|  |  |   |
|--|--|---|
| <br> | MALSR<br> | MISSED APPROACH: Climb to 700, then climbing left turn to 1700 direct NEFOR LOM and hold. |
|--|--|---|

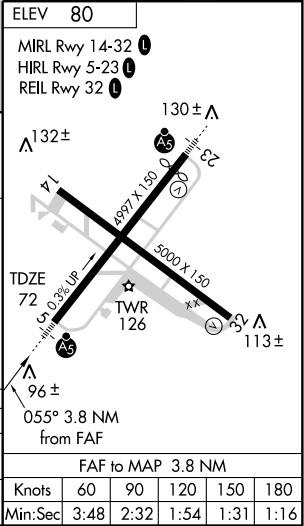
|                       |   |   |                         |                         |
|-----------------------|---|---|-------------------------|-------------------------|
| ATIS<br><b>126.85</b> | PROVIDENCE APP CON★<br><b>128.7 269,525</b> | NEW BEDFORD TOWER★<br><b>118.1 (CTAF) 239.0</b> | GND CON<br><b>121.9</b> | UNICOM<br><b>122.95</b> |
|-----------------------|---|---|-------------------------|-------------------------|



|                |
|----------------|
| ELEV 80        |
| MIRL Rwy 14-32 |
| HIRL Rwy 5-23  |
| REIL Rwy 32    |



| CATEGORY | A                  | B | C                   | D                   |
|----------|--------------------|---|---------------------|---------------------|
| S-5      | 640/40 568 (600-¾) |   | 640/50 568 (600-1)  | 640-1½ 568 (600-1½) |
| CIRCLING | 640-1 560 (600-1)  |   | 640-1½ 560 (600-1½) | 640-2 560 (600-2)   |



|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 4997 |
| 054°    | TDZE     | 72   |
|         | Apt Elev | 80   |

RNAV (GPS) RWY 5  
NEW BEDFORD RGNL (E'WB)

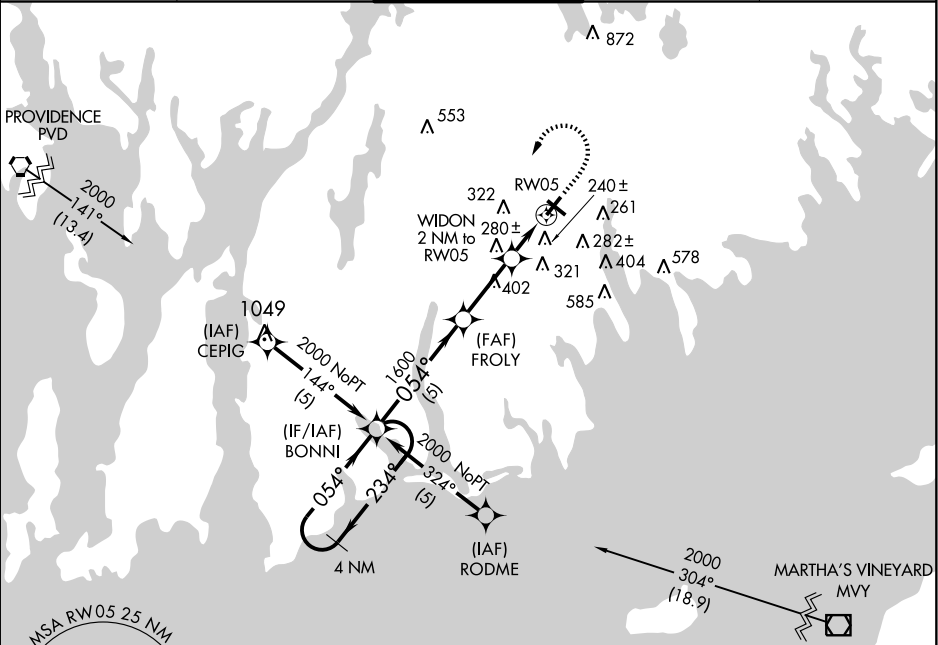
**NA**

GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

**MALSR**

MISSED APPROACH: Climb to 700 then climbing left turn to 2000 direct BONNI WP and hold.

|                |                                      |  |                  |                  |
|----------------|--------------------------------------|--|------------------|------------------|
| ATIS<br>126.85 | PROVIDENCE APP CON★<br>128.7 269,525 | NEW BEDFORD TOWER★<br>118.1 (CTAF) 0 239.0 | GND CON<br>121.9 | UNICOM<br>122.95 |
|----------------|--------------------------------------|--|------------------|------------------|



4 NM Holding Pattern

700 2000 BONNI

2000 ← 234° 054° → 1600

FROLY

WIDON 2 NM to RW05

1.4 NM to RW05

2.93° ≥ 720 TCH 45

5 NM 2.8 NM 0.6 1.4

| CATEGORY | A                  | B                   | C                  | D |
|----------|--------------------|---------------------|--------------------|---|
| RNAV MDA | 540/24 468 (500-½) | 540/40 468 (500-¾)  | 540/50 468 (500-1) |   |
| CIRCLING | 620-1 540 (600-1)  | 640-1½ 560 (600-1½) | 640-2 560 (600-2)  |   |

ELEV 80

130± 132± 113±

TDZE 72

UN 0.3% UP

5000 X 150

TWR 126

96±

054° to RW05

MIRL Rwy 14-32 1

HIRL Rwy 5-23 1

REIL Rwy 32 1

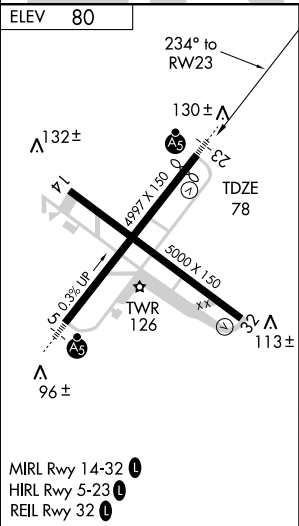
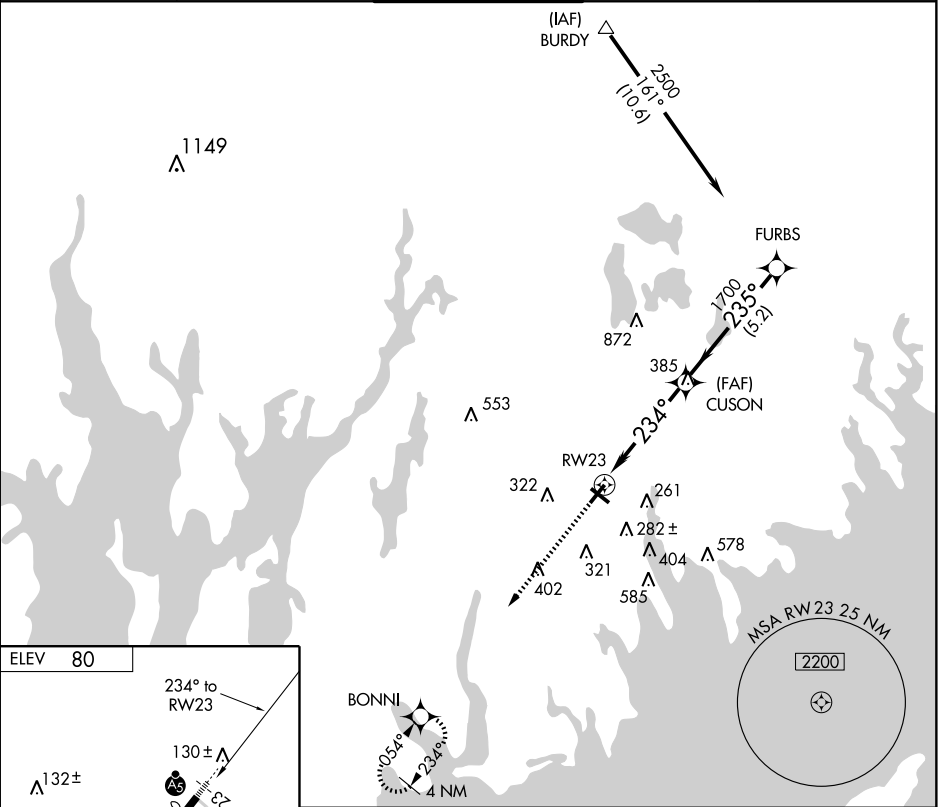
|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 4584 |
| 234°    | TDZE     | 78   |
|         | Apt Elev | 80   |



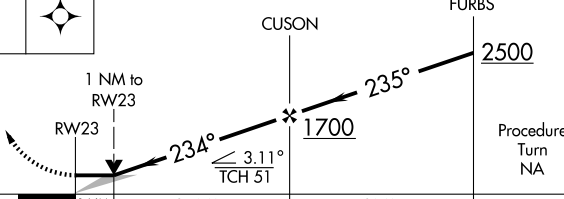
# RNAV (GPS) RWY 23

NEW BEDFORD RGNL (EWB)

|  |  |   |
|--|--|---|
|  For inoperative MALS, increase LNAV Cat A/B/C visibility to 1, Cat D to 1 1/4. | MALS   | MISSED APPROACH: Climb to 2000 direct to BONNI WP and hold. |
|  NA   |  NA |   |

|                |                                      |  |                  |                  |
|----------------|--------------------------------------|--|------------------|------------------|
| ATIS<br>126.85 | PROVIDENCE APP CON*<br>128.7 269,525 | NEW BEDFORD TOWER*<br>118.1 (CTAF) 239.0 | GND CON<br>121.9 | UNICOM<br>122.95 |
|----------------|--------------------------------------|--|------------------|------------------|



|   |   |   |   |                      |
|---|---|---|---|----------------------|
| 2000  | BONNI   |   |   |                      |
|  |  |   |   |                      |
|  |   |   |   |                      |
| CATEGORY  | A   | B | C   | D                    |
| LNAV MDA  | 460- $\frac{3}{4}$ 382 (400- $\frac{3}{4}$ )  |   |   | 460-1<br>382 (400-1) |
| CIRCLING  | 620-1 540 (600-1)   |   | 640-1 $\frac{1}{2}$<br>560 (600-1 $\frac{1}{2}$ ) | 640-2<br>560 (600-2) |

# TEDDY THREE ARRIVAL

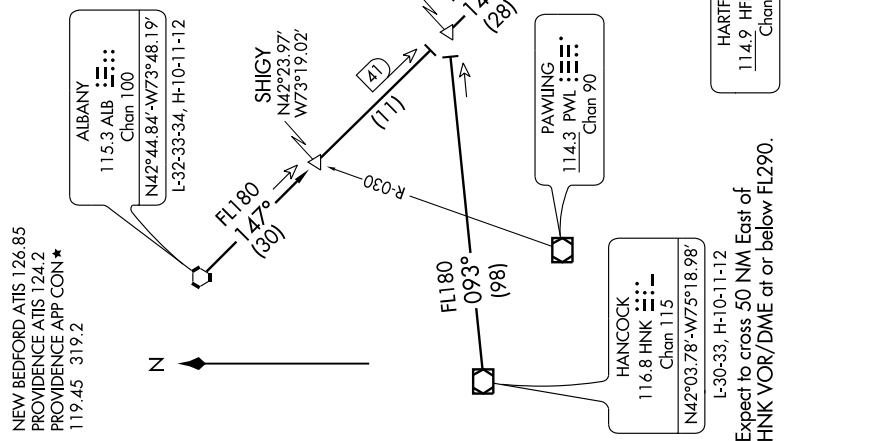
PROVIDENCE, RHODE ISLAND

## ARRIVAL ROUTE DESCRIPTION

ALBANY TRANSITION (ALB.TEDDY3): From over ALB VORTAC via ALB R-147 to PONEE INT, then via BDL R-329 to BDL VORTAC. Thence . . . .

HANCOCK TRANSITION (HNK.TEDDY3): From over HNK VOR/DME, via HNK R-093 to PONEE INT, then via BDL R-329 to BDL VORTAC. Thence . . . .

. . . . From over BDL VORTAC via BDL R-140 to WIPOR INT (MEA 11,000), then via ORW R-321 to ORW VOR/DME (MEA 6,000), then via ORW R-128 to LAFAY INT (MEA 3,000). Expect radar vectors to final approach course.



NOTE: Chart not to scale.

|             |          |             |
|-------------|----------|-------------|
| APP CRS     | Rwy Idg  | <b>3365</b> |
| <b>143°</b> | TDZE     | <b>121</b>  |
|             | Apt Elev | <b>121</b>  |

# RNAV (GPS) RWY 14

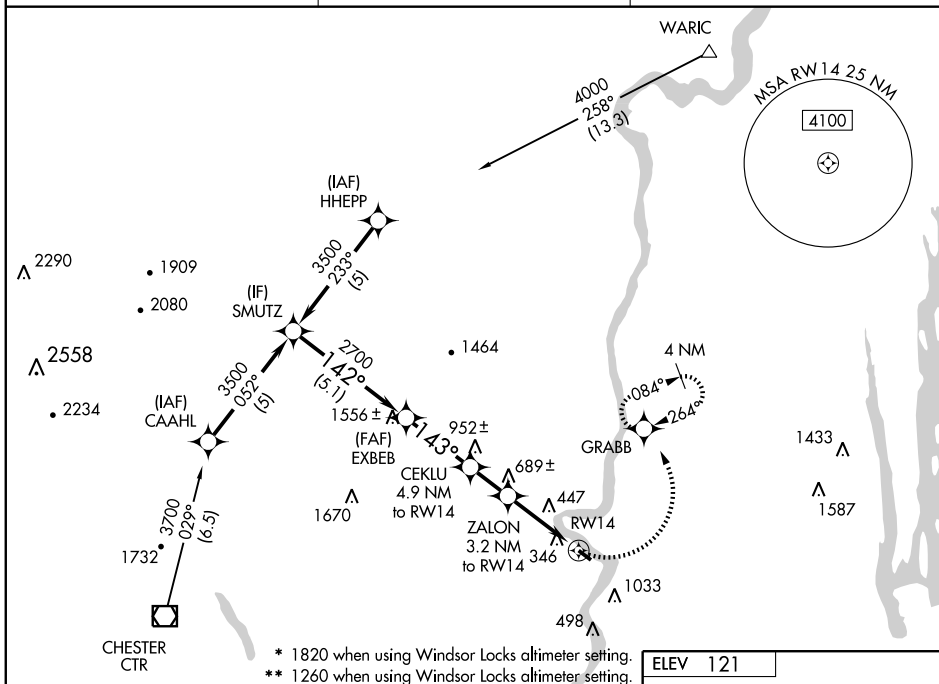
## NORTHAMPTON (7B2)

|             |   |
|-------------|---|
| <b>T</b>    | DME/DME RNP-0.3 NA.   |
| <b>A</b> NA | Obtain local altimeter setting on CTAF; when not received, use Windsor Locks altimeter setting. |

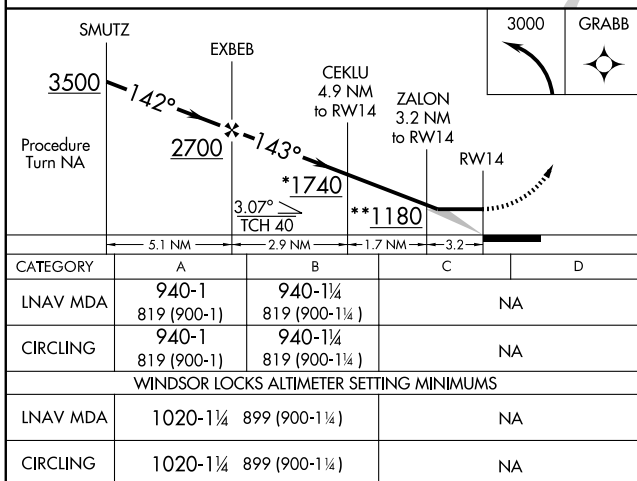
**MISSED APPROACH:** Climbing left turn to 3000 direct GRABB and hold, continue climb-in-hold to 3000.

BRADLEY APP CON  
125.35 281.5

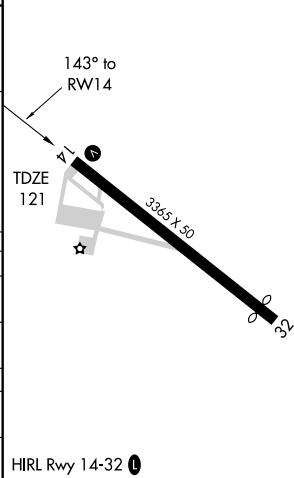
CLNC DEL  
**133.6**

UNICOM  
122.7 (CTAF) **L**

NE-1. 22 OCT 2009 to 19 NOV 2009



ELEV 121



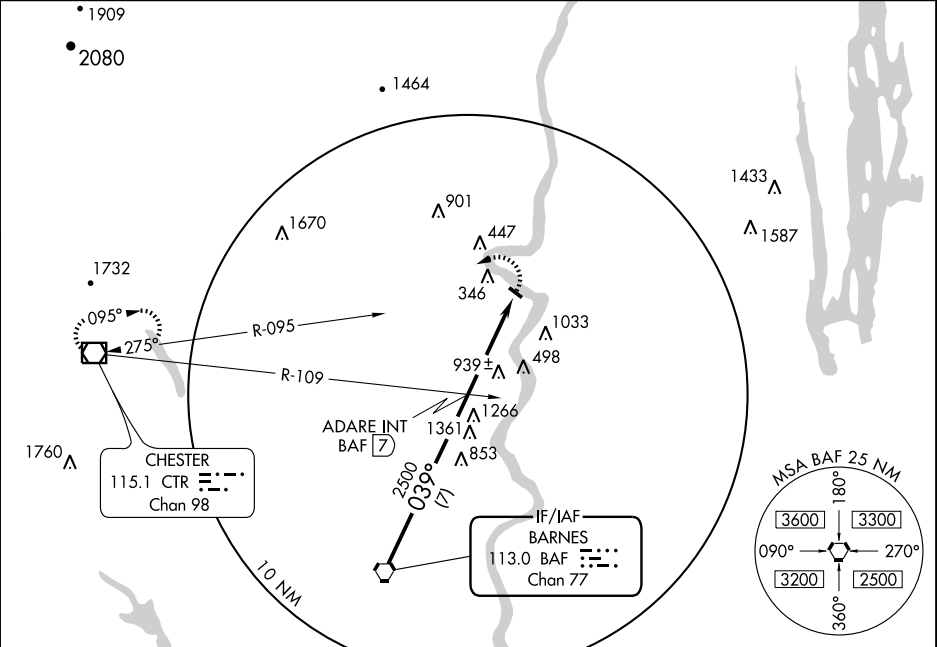
|                                |                 |                                    |                   |
|--------------------------------|-----------------|------------------------------------|-------------------|
| VORTAC BAF<br>113.0<br>Chan 77 | APP CRS<br>039° | Rwy Idg<br>TDZE<br>Apt Elev<br>121 | N/A<br>N/A<br>121 |
|--------------------------------|-----------------|------------------------------------|-------------------|

VOR-A  
NORTHAMPTON (7B2)

Obtain local altimeter on CTAF; when not received, use Windsor Locks altimeter setting.

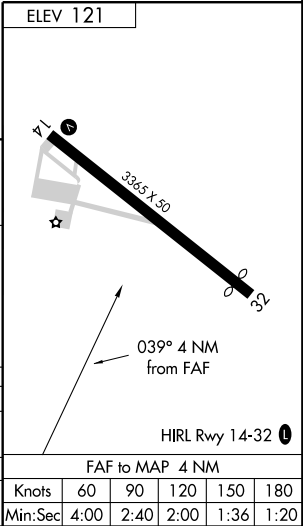
MISSED APPROACH: Climbing left turn to 4000 via CTR VOR/DME R-095 to CTR VOR/DME and hold.

|                                 |                   |                        |
|---------------------------------|-------------------|------------------------|
| BRADLEY APP CON<br>125.35 281.5 | CLNC DEL<br>133.6 | UNICOM<br>122.7 (CTAF) |
|---------------------------------|-------------------|------------------------|



RADAR REQUIRED

|  |                           |                           |    |    |
|--|---------------------------|---------------------------|----|----|
| VORTAC                                   |                           |                           |    |    |
| 3000                                     |                           |                           |    |    |
| 039°                                     |                           |                           |    |    |
| ADARE INT BAF 7                          |                           |                           |    |    |
| 2500                                     |                           |                           |    |    |
| 7 NM                                     |                           |                           |    |    |
| 4 NM                                     |                           |                           |    |    |
| BAF 10.9                                 |                           |                           |    |    |
| CATEGORY                                 | A                         | B                         | C  | D  |
| CIRCLING                                 | 1540-1¼<br>1419 (1500-1¼) | 1540-1½<br>1419 (1500-1½) | NA | NA |
| WINDSOR LOCKS ALTIMETER SETTING MINIMUMS |                           |                           |    |    |
| CIRCLING                                 | 1620-1¼<br>1499 (1500-1¼) | 1620-1½<br>1499 (1500-1½) | NA | NA |



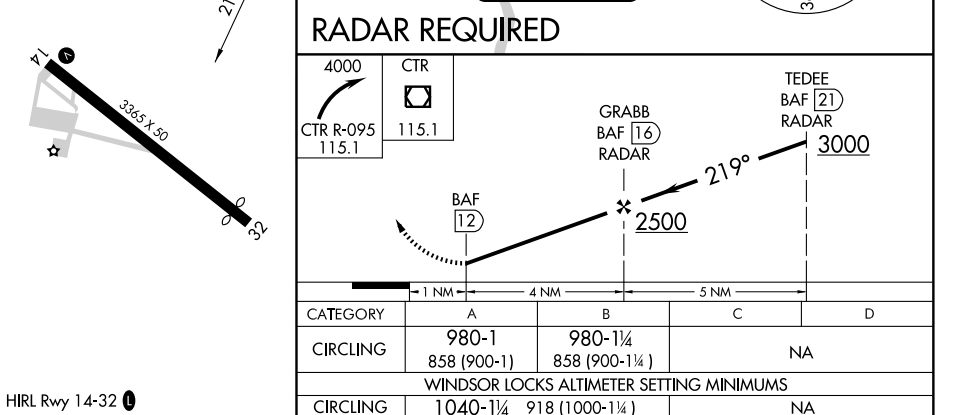
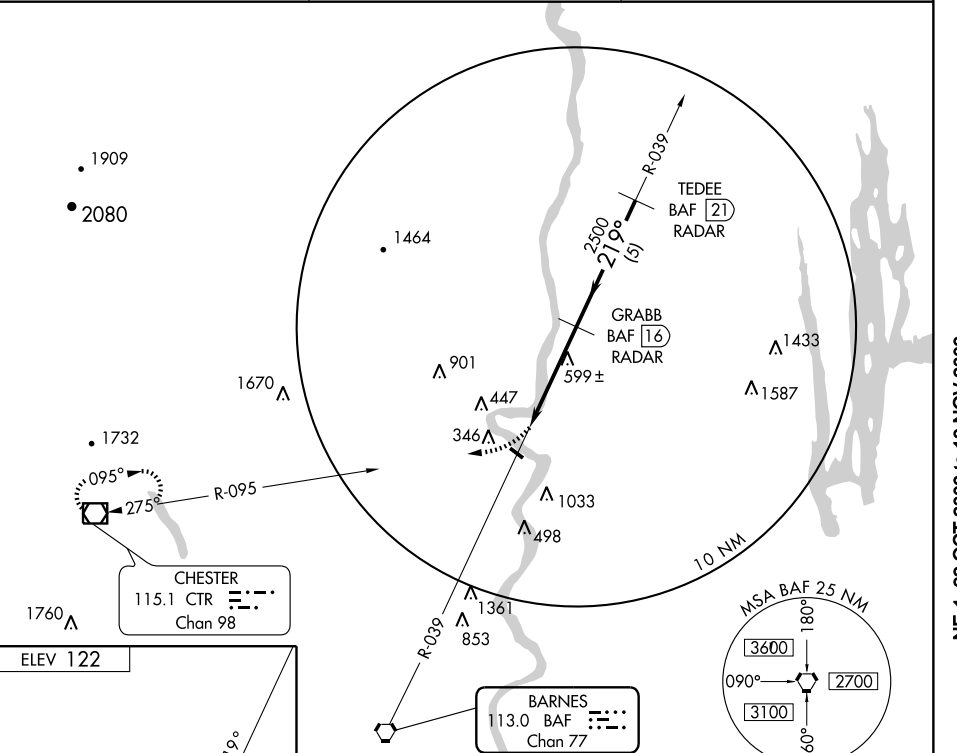
Obtain local altimeter on CTAF; when not received, use Windsor Locks altimeter setting.

MISSED APPROACH: Climbing right turn to 4000 via CTR R-095 to CTR VOR/DME and hold.

BRADLEY APP CON  
**125.35 281.5**

CLNC DEL  
**133.6**

UNICOM  
**122.7 (CTAF)**

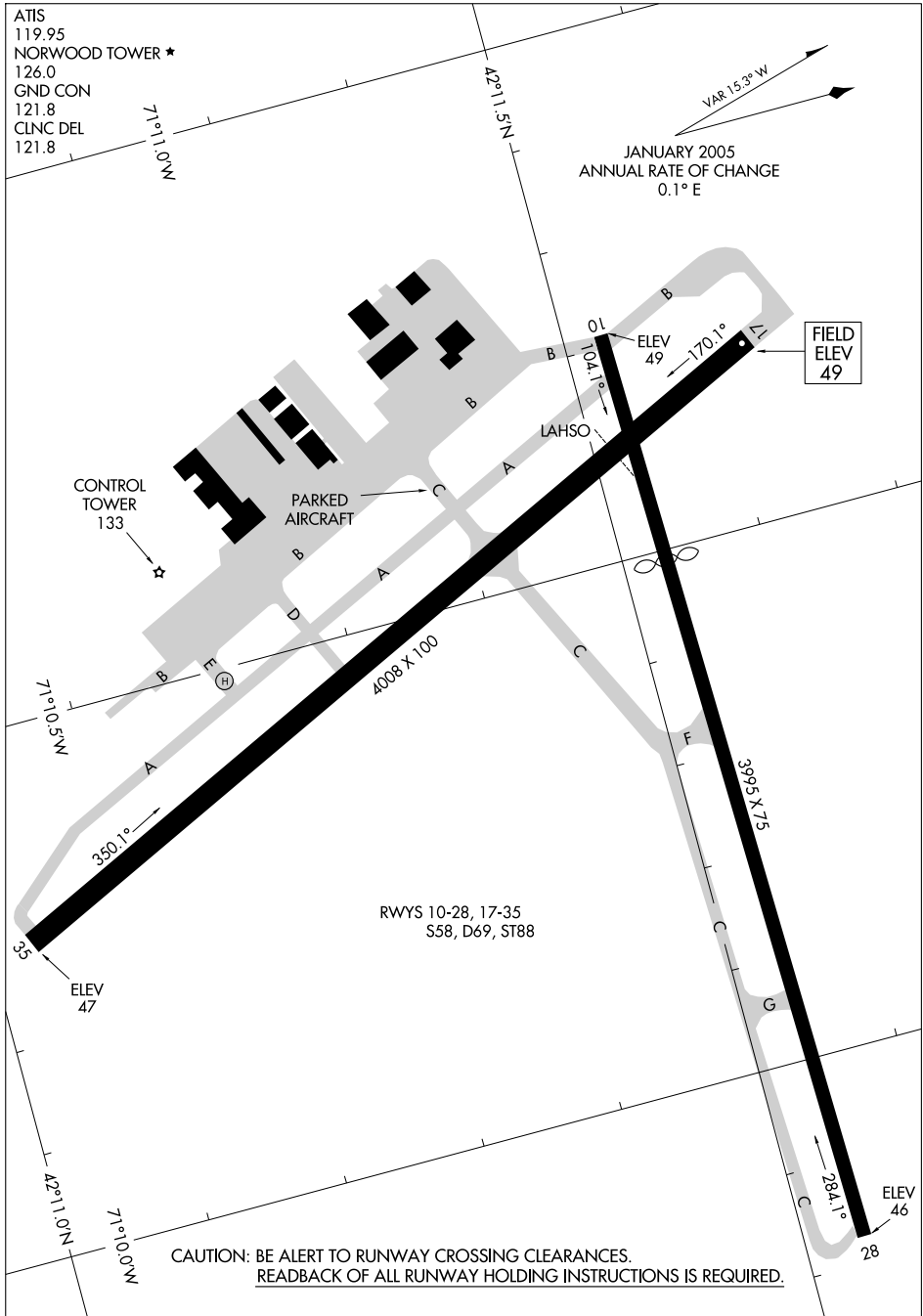




# AIRPORT DIAGRAM

AL-725 (FAA)

NORWOOD MEMORIAL (OWD)  
NORWOOD, MASSACHUSETTS



NE-1, 22 OCT 2009 to 19 NOV 2009

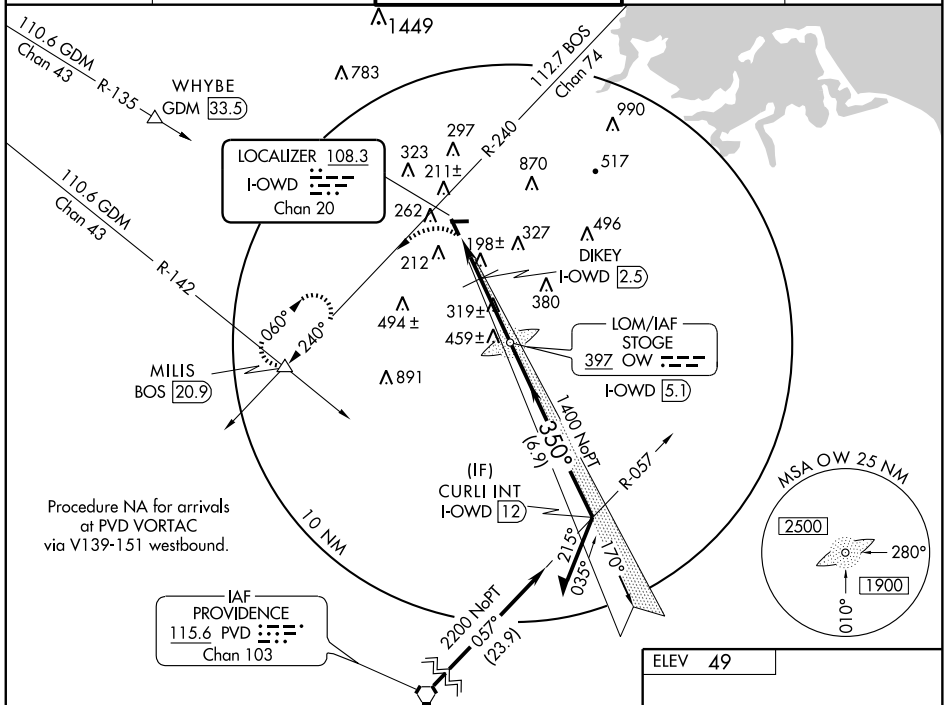
|   |                        |   |
|---|------------------------|---|
| LOC/DME I-OWD<br><b>108.3</b><br>Chan <b>20</b> | APP CRS<br><b>350°</b> | Rwy Idg<br>TDZE <b>49</b><br>Apt Elev <b>49</b> |
|---|------------------------|---|

# LOC RWY 35

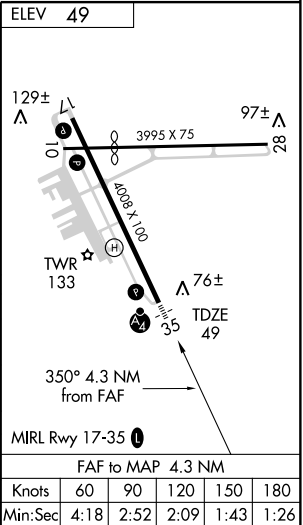
## NORWOOD MEMORIAL (OWD)

|  |                          |   |
|--|--------------------------|---|
| <p><b>▼</b> Circling to Rwy 10/28 NA at night.<br/><b>▲</b> Inoperative table does not apply to Cat C.</p> | <p><b>MALSF</b><br/></p> | <p><b>MISSED APPROACH:</b> Climbing left turn to 3000 via BOS VOR/DME R-240 to MILIS INT/BOS 20.9 DME and hold, continue climb-in-hold to 3000.</p> |
|--|--------------------------|---|

|                              |   |   |                                |                                 |
|------------------------------|---|---|--------------------------------|---------------------------------|
| <b>ATIS</b><br><b>119.95</b> | <b>BOSTON APP CON</b><br><b>124.1 263.1</b> | <b>NORWOOD TOWER ★</b><br><b>126.0 (CTAF) 0</b> | <b>GND CON</b><br><b>121.8</b> | <b>CLNC DEL</b><br><b>121.8</b> |
|------------------------------|---|---|--------------------------------|---------------------------------|



| CATEGORY           | A                 | B                   | C                   | D                   |
|--------------------|-------------------|---------------------|---------------------|---------------------|
| S-35               | 580-¾ 531 (600-¾) | 580-1½ 531 (600-1½) | 580-1¾ 531 (600-1¾) | 580-1¾ 531 (600-1¾) |
| CIRCLING           | 600-1 551 (600-1) | 640-1½ 591 (600-1½) | 680-2 631 (700-2)   | 680-2 631 (700-2)   |
| DIKEY FIX MINIMUMS |                   |                     |                     |                     |
| S-35               | 500-¾ 451 (500-¾) | 500-1¼ 451 (500-1¼) | 500-1½ 451 (500-1½) | 500-1½ 451 (500-1½) |
| CIRCLING           | 600-1 551 (600-1) | 640-1½ 591 (600-1½) | 680-2 631 (700-2)   | 680-2 631 (700-2)   |



## NORWOOD EIGHT DEPARTURE

SL-725 (FAA)

NORWOOD, MASSACHUSETTS

ATIS 119.95  
CLNC DEL  
121.8  
GND CON  
121.8  
NORWOOD TOWER ★  
126.0 (CTAF)  
BOSTON DEP CON  
124.1 263.1

NOTE: Chart not to scale.

MANCHESTER  
114.4 MHT  
Chan 91  
N42°52.11'-W71°22.17'  
L-32-33

PEASE  
116.5 PSM  
Chan 112  
N43°05.07'-W70°49.92'  
L-32-33, H-11-12

CHESTER  
115.1 CTR  
Chan 98  
N42°17.48'-W72°56.96'  
L-33-34,  
H-10-11-12

GLYDE  
N42°16.06'  
W71°48.71'  
L-33-34 △

BOSOX  
N42°12.11'  
W71°37.66'  
△ L-33-34

NOTE: RADAR required.

DRUNK  
N42°04.90'  
W70°39.38'  
△ L-33

BARNES  
113.0 BAF  
Chan 77  
N42°09.72'-W72°42.97'  
L-33-34, H-10-11-12

BRADLEY  
109.0 BDL  
Chan 27  
N41°56.46'-W72°41.31'  
L-33-34, H-10-11-12

284° — 104°  
700 1100

BURDY  
N41°57.32'  
W70°57.12'  
L-33, H-10-11-12

ARCER  
N41°46.59'  
W70°48.62'  
△ L-33

NELIE  
N41°55.68'  
W72°42.37'  
H-10-11-12

(NOTES ON FOLLOWING PAGE)

SANDY POINT  
117.8 SEY  
Chan 125  
N41°10.05'-W71°34.57'  
L-33, H-10-12

PROVIDENCE  
115.6 PVD  
Chan 103  
N41°43.46'-W71°25.78'  
L-33-34, H-10-11-12

LUCOS  
N41°38.29'  
W70°46.09'  
△ L-33, H-10-11-12

NANTUCKET  
116.2 ACK  
Chan 109  
N41°16.91'-W70°01.60'  
L-33, H-10-12

## TAKE-OFF MINIMUMS:

- Rwy 10, 300-2 ¼ or STANDARD with minimum climb of 340' per NM to 400.  
Rwy 17, 300-2 ¼ or STANDARD with minimum climb of 220' per NM to 400,  
or alternatively, with standard takeoff minimums and a normal 200'/NM climb  
gradient, takeoff must occur no later than 1600' prior to departure end of runway.  
Rwy 28, 400-2 or STANDARD with minimum climb of 385' per NM to 400.  
Rwy 35, 300-2 or STANDARD with minimum climb of 230' per NM to 500,  
or alternatively, with standard takeoff minimums and a normal 200'/NM climb  
gradient, takeoff must occur no later than 2100' prior to departure end of runway.



## DEPARTURE ROUTE DESCRIPTION

- TAKE-OFF RUNWAY 10: Climb heading 104° to 1100, then as assigned by ATC, Thence . . .  
TAKE-OFF RUNWAY 17: Climb on assigned heading for radar vectors to assigned NAVAID/  
FIX, Thence . . .  
TAKE-OFF RUNWAY 28: Climb heading 284° to 700, then assigned by ATC, Thence . . .  
TAKE-OFF RUNWAY 35: Climb heading 280° to 330° as assigned by ATC, Thence . . .

. . . All aircraft expect radar vectors to appropriate depicted NAVAID/FIX. Maintain 2000.  
Expect further clearance to filed altitude/flight level 10 minutes after departure.

## NORWOOD EIGHT DEPARTURE

TAKE-OFF OBSTACLES:

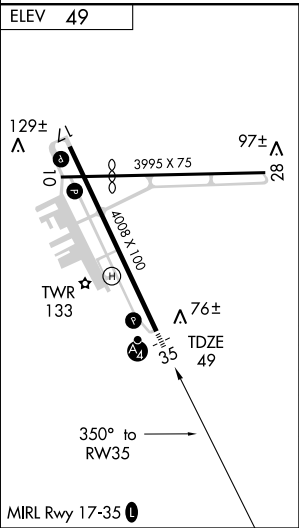
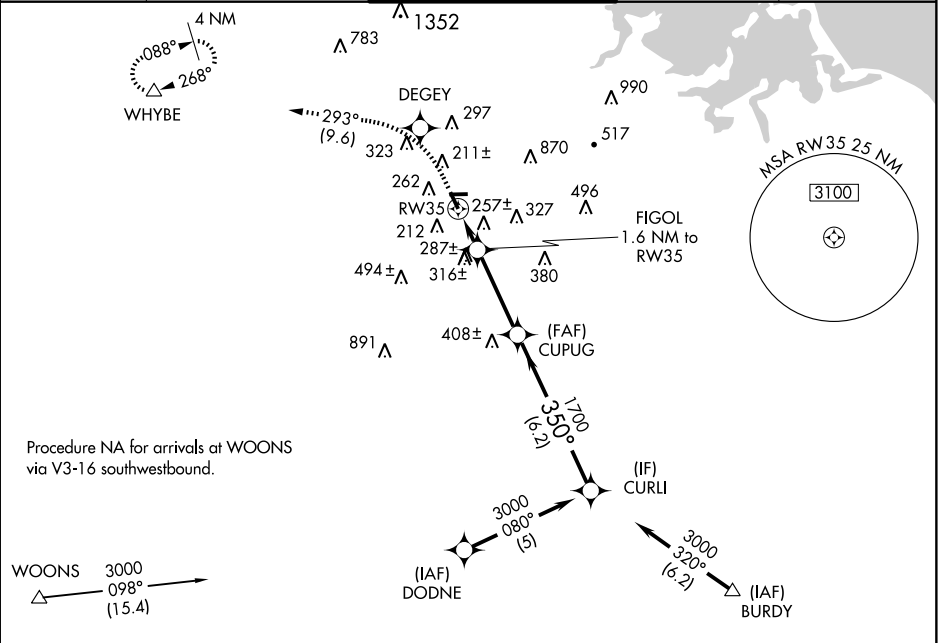
- Rwy 10: Trees and bushes beginning abeam DER, 177' right of centerline, up to 100' AGL/178' MSL. Tree 4488' from DER, 911' right of centerline, up 100' AGL/237' MSL. Tree 5428' from DER, 1946' right of centerline, 100' AGL/267' MSL. Trees beginning abeam DER, 34' left of centerline, up to 100' AGL/149' MSL. Tree 1.9 NM from DER, 2124' left of centerline, 100' AGL/346' MSL.
- Rwy 17: Trees beginning 42' from DER, 248' left of centerline, up to 78' AGL/126' MSL. Tree 1.2 NM from DER, 2183' left of centerline, 100' AGL/257' MSL. Trees beginning 612' from DER, 155' right of centerline, up to 100' AGL/198' MSL. Tree 1.8 NM from DER, 3301' right of centerline, 100' AGL/346' MSL.
- Rwy 28: Trees beginning 594' from DER, 41' left of centerline, up to 70' AGL/188' MSL. Building 173' from DER, 514' left of centerline, 30' AGL/79' MSL. Stack spire, rod on stack, light, antenna, and power poles beginning 202' from DER, 211' left of centerline, up to 99' AGL/335' MSL. Building 173' from DER, 514' left of centerline, 30' AGL/79' MSL. Vehicle on highway 1499' from DER, 877' left of centerline, 17' AGL/105' MSL. Spire, pole, antenna on tank, and antenna on spire beginning 1225' from DER, 301' right of centerline, up to 70' AGL/335' MSL. Vehicle on highway 1316' from DER, 459' right of centerline, 17' AGL/85' MSL. Building 1016' from DER 59' right of centerline, 30' AGL/89' MSL. Tower 4466' from DER, 238' right of centerline, 157' AGL/262' MSL. Tree 1.7 NM from DER, 673' right of centerline, 100' AGL/365' MSL. Trees 549' from DER, 49' right of centerline, up to 70' AGL/188' MSL.
- Rwy 35: Trees beginning 647' from DER, 36' left of centerline, up to 74' AGL/133' MSL. Tree 1.4 NM from DER, 2382' left of centerline, up to 100' AGL/306' MSL. Tree 1.7 NM from DER, 2657' left of centerline, up to 100' AGL/316' MSL. Buildings 1994' from DER, 1031' left of centerline, up to 70' AGL/129' MSL. Trees beginning 694' from DER, 60' right of centerline, up to 73' AGL/125' MSL. Poles beginning 5686' from DER, 769' right of centerline, up to 148' AGL/216' MSL.

|  |                        |                             |                                       |
|--|------------------------|-----------------------------|---------------------------------------|
| WAAS<br>CH <b>86400</b><br><b>W35A</b> | APP CRS<br><b>350°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>4008</b><br><b>49</b><br><b>49</b> |
|--|------------------------|-----------------------------|---------------------------------------|

RNAV (GPS) RWY 35  
NORWOOD MEMORIAL (OWD)

|  |       |   |
|--|-------|---|
| Circling to Rwy 28 NA at night. Inoperative table does not apply to LPV, LNAV/VNAV all Cats, and LNAV Cat C. | MALSF | MISSED APPROACH: Climb to 3000 direct DEGEY WP and via 293° track to WHYBE WP and hold, continue climb-in-hold to 3000. |
| Baro-VNAV NA below -1.5°C (5°F). DME/DME RNP-0.3 NA.   | DME   |   |

|                       |                                      |  |                         |                          |
|-----------------------|--------------------------------------|--|-------------------------|--------------------------|
| ATIS<br><b>119.95</b> | BOSTON APP CON<br><b>124.1 263.1</b> | NORWOOD TOWER ★<br><b>126.0</b> (CTAF) | GND CON<br><b>121.8</b> | CLNC DEL<br><b>121.8</b> |
|-----------------------|--------------------------------------|--|-------------------------|--------------------------|



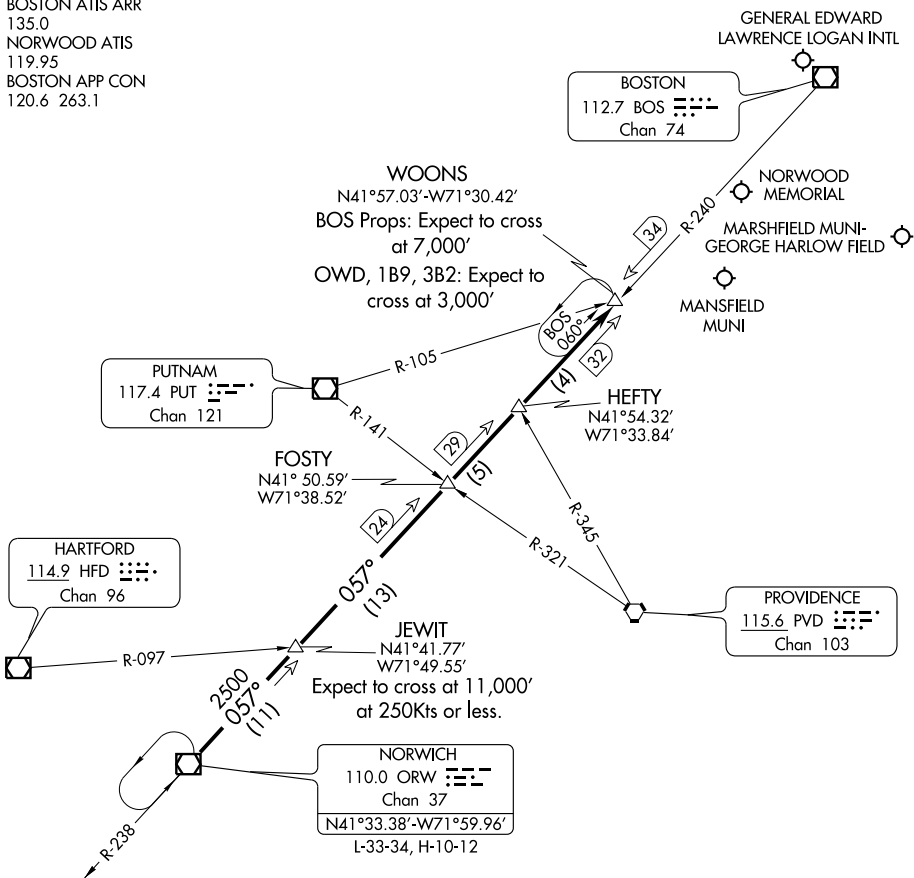
|              |                   |                      |                     |        |                     |
|--------------|-------------------|----------------------|---------------------|--------|---------------------|
|              | 3000              | DEGEY                | 293° track          | WHYBE  |                     |
|              |                   |                      |                     |        | CURLI               |
|              |                   | FIGOL 1.6 NM to RW35 | CUPUG               |        | 3000                |
|              |                   | RW35                 |                     |        | Procedure Turn NA   |
|              |                   | 600                  | 1700                |        | GS 3.00°            |
|              |                   | 1.6                  | 3.4 NM              | 6.2 NM | TCH 40              |
| CATEGORY     | A                 | B                    | C                   | D      |                     |
| LPV DA       | 344-1 295 (300-1) |                      |                     |        |                     |
| LNAV/VNAV DA | 594-2 545 (600-2) |                      |                     |        |                     |
| LNAV MDA     | 540-¾ 491 (500-¾) |                      | 540-1¼ 491 (500-1¼) |        | 540-1½ 491 (500-1½) |
| CIRCLING     | 600-2 551 (600-2) |                      | 640-2 591 (600-2)   |        | 680-2 631 (700-2)   |

## WOONS ONE ARRIVAL

ST-58 (FAA)

BOSTON, MASSACHUSETTS

BOSTON ATIS ARR  
135.0  
NORWOOD ATIS  
119.95  
BOSTON APP CON  
120.6 263.1



NE-1, 22 OCT 2009 to 19 NOV 2009

From over ORW VOR/DME via ORW R-057 to WOONS INT. Expect radar vectors to final.

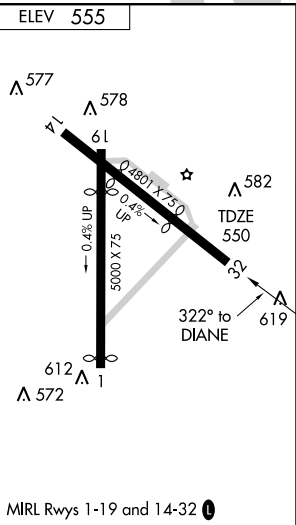
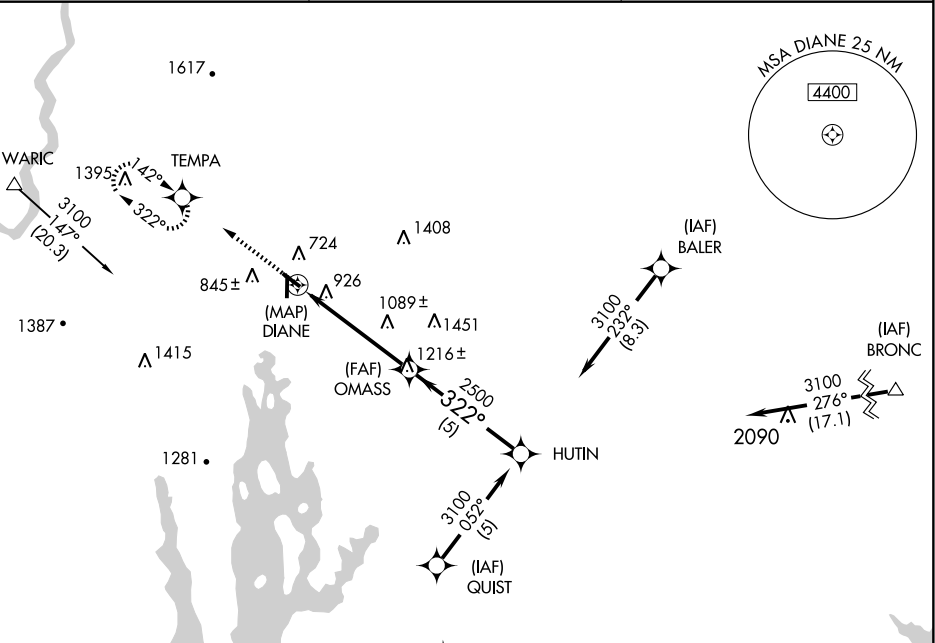
|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 3142 |
| 322°    | TDZE     | 550  |
|         | Apt Elev | 555  |

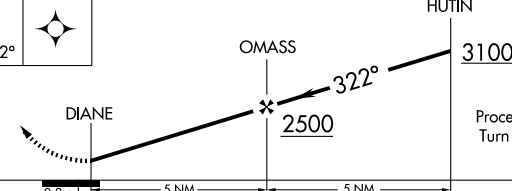
GPS RWY 32

ORANGE MUNI(ORE)

|                              |  |
|------------------------------|--|
| <div>▼</div> <div>▲ NA</div> | MISSED APPROACH: Climb to 3000 via 322° course to TEMPA WP and hold. |
|------------------------------|--|

|                 |                               |                          |
|-----------------|-------------------------------|--------------------------|
| ASOS<br>135.675 | BOSTON CENTER<br>123.75 338.2 | UNICOM<br>122.8 (CTAF) 0 |
|-----------------|-------------------------------|--------------------------|



|   |         |   |   |    |
|---|---------|---|---|----|
| <div>3000</div> <div>↑</div> <div>CRS 322°</div>  |         | <div>TEMPA</div> <div>✧</div>                 |   |    |
| <div>DIANE</div> <div></div> |         | <div>OMASS</div> <div>✕</div> <div>2500</div> | <div>HUTIN</div> <div>3100</div> <div>Procedure Turn NA</div> |    |
| CATEGORY  | A       | B   | C   | D  |
| S-32  | 1480-1¼ | 930 (1000-1¼)                                 | 1480-2¾<br>930 (1000-2¾)                                      | NA |
| CIRCLING  | 1480-1¼ | 925 (1000-1¼)                                 | 1480-2¾<br>925 (1000-2¾)                                      | NA |

NE-1: 22 OCT 2009 to 19 NOV 2009

NDB ORE  
**205**

APP CRS  
022°

|          |      |
|----------|------|
| Rwy Idg  | 4900 |
| TDZE     | 552  |
| Apt Elev | 555  |

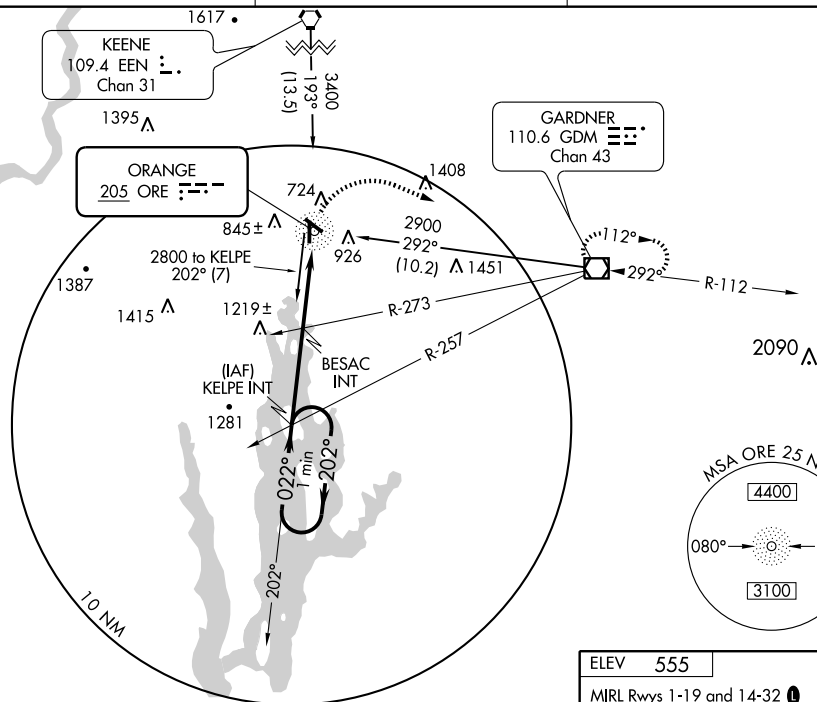
**MISSED APPROACH:** Climbing right turn to 3500 direct GDM VOR/DME and hold.

Cat D circling NA to Rwy 14-32.

ASOS  
135,675

BOSTON CENTER  
123.75 338.2

UNICOM  
122.8 (CTAF) **L**



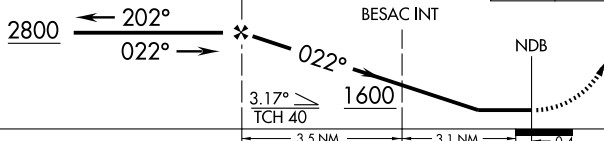
## One Minute Holding Pattern

KELPE INT

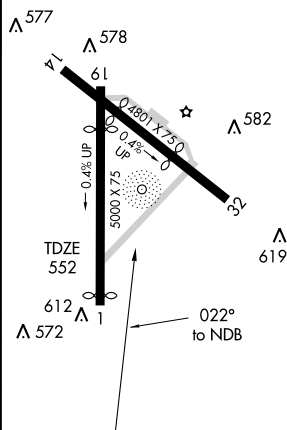
3500

GDM

ELEV 555

MIRL Rwy 1-19 and 14-32 **L**

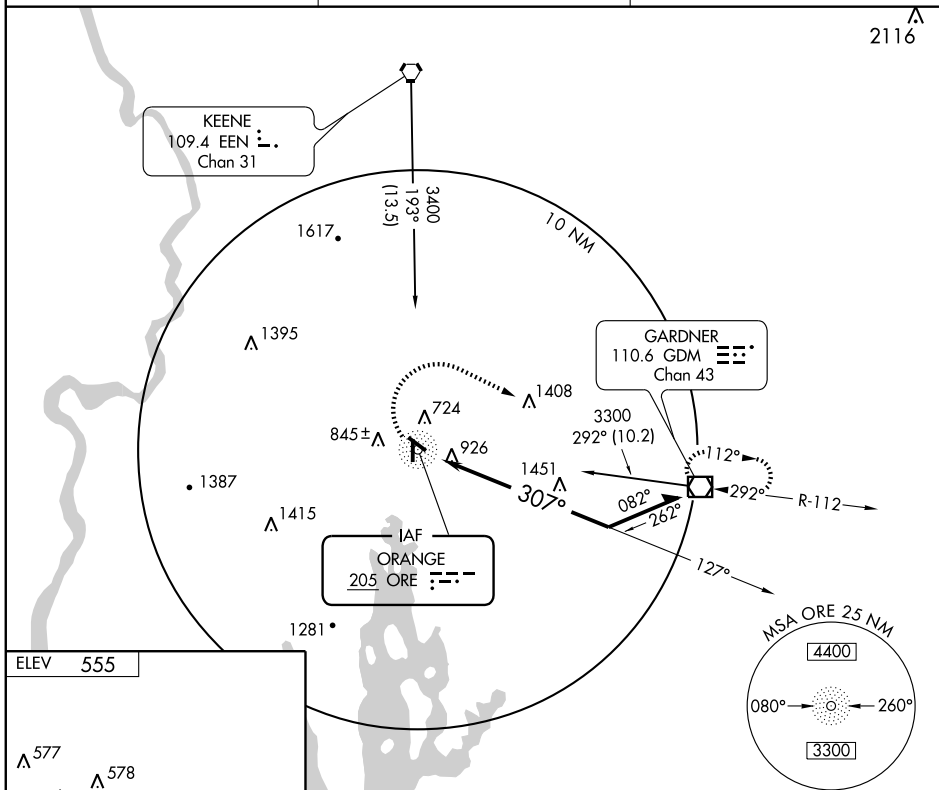
| CATEGORY           | A                         | B                         | C      | D             |
|--------------------|---------------------------|---------------------------|--------|---------------|
| S-1                | 1600-1¼<br>1048 (1100-1¼) | 1600-1½<br>1048 (1100-1½) | 1600-3 | 1048 (1100-3) |
| CIRCLING           | 1600-1¼<br>1045 (1100-1¼) | 1600-1½<br>1045 (1100-1½) | 1600-3 | 1045 (1100-3) |
| BESAC FIX MINIMUMS |                           |                           |        |               |
| S-1                | 1520-1¼<br>968 (1000-1¼)  | 1520-1½<br>968 (1000-1½)  | 1520-3 | 968 (1000-3)  |
| CIRCLING           | 1520-1¼<br>965 (1000-1¼)  | 1520-1½<br>965 (1000-1½)  | 1520-3 | 965 (1000-3)  |





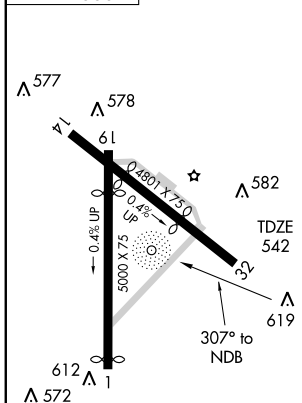
|          |             |
|----------|-------------|
| Rwy Idg  | <b>3142</b> |
| TDZE     | <b>542</b>  |
| Apt Elev | <b>555</b>  |



**MISSED APPROACH:** Climbing right turn to 3500 direct GDM VOR/DME and hold.

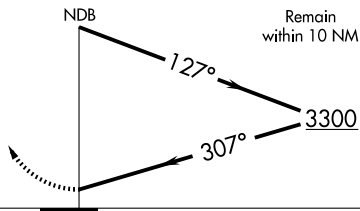
UNICOM  
122.8 (CTAF) 
$$\begin{array}{r} \Delta \\ 2116 \end{array}$$


NE-1. 22 OCT 2009 to 19 NOV 2009

|      |     |
|------|-----|
| ELEV | 555 |
|------|-----|



|   |   |
|---|---|
| 3500  | GDM   |
|  |  |
|   | 110.6   |




| CATEGORY | A                         | B                         | C                       | D  |
|----------|---------------------------|---------------------------|-------------------------|----|
| S-32     | 1860-1¼<br>1318 (1400-1¼) | 1860-1½<br>1318 (1400-1½) | 1860-3<br>1318 (1400-3) | NA |
| CIRCLING | 1860-1¼<br>1305 (1400-1¼) | 1860-1½<br>1305 (1400-1½) | 1860-3<br>1305 (1400-3) | NA |

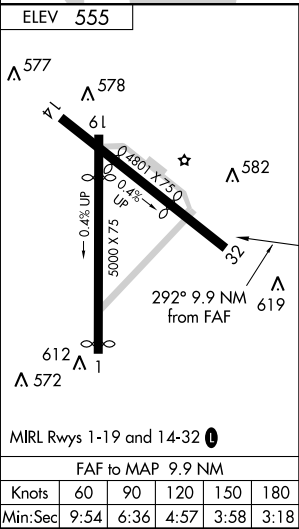
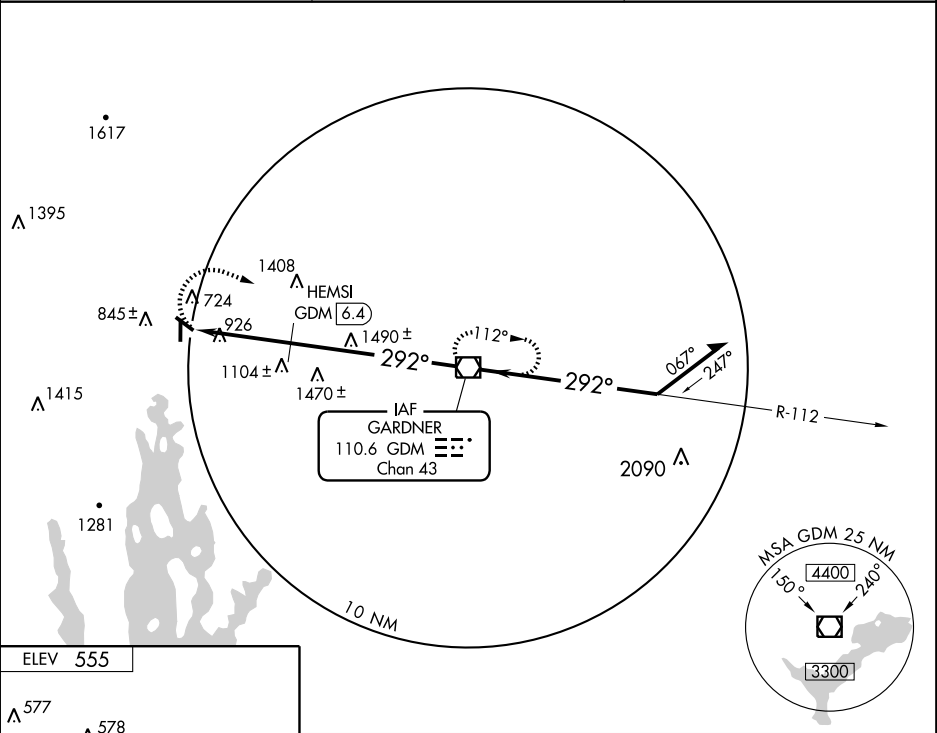
MIRL Rwy's 1-19 and 14-32 **L**






|   |                        |                             |                          |
|---|------------------------|-----------------------------|--------------------------|
| VOR/DME GDM<br><b>110.6</b><br>Chan <b>43</b> | APP CRS<br><b>292°</b> | Rwy Idg<br>TDZE<br>Apt Elev | N/A<br>N/A<br><b>555</b> |
|---|------------------------|-----------------------------|--------------------------|

VOR-A  
ORANGE MUNI(ORE)

|  |                                     |   |
|--|-------------------------------------|---|
| <br> | Circling to Rwy 14-32 NA for Cat D. | MISSED APPROACH: Climbing right turn to 3500 direct GDM VOR/DME and hold. |
|--|-------------------------------------|---|

|                        |                                      |   |
|------------------------|--------------------------------------|---|
| ASOS<br><b>135.675</b> | BOSTON CENTER<br><b>123.75 338.2</b> | UNICOM<br><b>122.8 (CTAF)</b>  |
|------------------------|--------------------------------------|---|



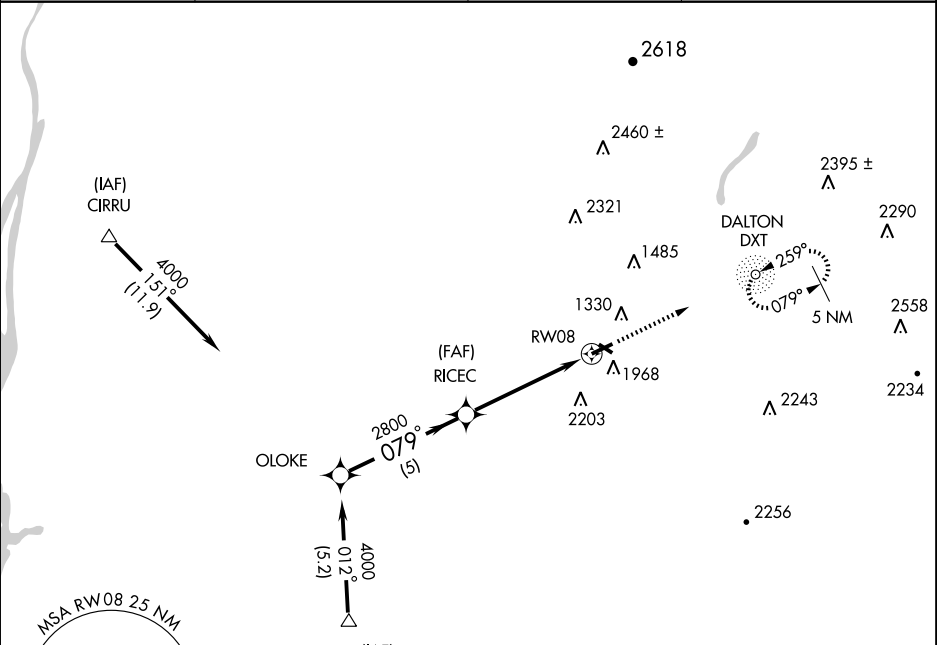
|  |   |                           |                         |                         |  |
|--|---|---------------------------|-------------------------|-------------------------|--|
| <br>3500          | GDM<br><br>110.6 | Remain within 10 NM       |                         |                         |  |
| <br>VOR/DME       |   |                           |                         |                         |  |
| <br>HEMSI GDM 6.4 |   |                           |                         |                         |  |
| <br>GDM 9.9       |   |                           |                         |                         |  |
| 1940   |   |                           |                         |                         |  |
| 3.5 NM 6.4 NM  |   |                           |                         |                         |  |
| CATEGORY   | A   | B                         | C                       | D                       |  |
| CIRCLING   | 1940-1¼<br>1385 (1400-1¼)   | 1940-1½<br>1385 (1400-1½) | 1940-3                  | 1385 (1400-3)           |  |
| HEMSI FIX MINIMUMS   |   |                           |                         |                         |  |
| CIRCLING   | 1360-1<br>805 (900-1)   | 1360-1¼<br>805 (900-1¼)   | 1360-2¼<br>805 (900-2¼) | 1360-2½<br>805 (900-2½) |  |

|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 5001 |
| 079°    | TDZE     | 1194 |
|         | Apt Elev | 1194 |

GPS RWY 8  
PITTSFIELD MUNI (PSF)

|  |  |
|--|--|
| Category A and B CIRCLING NA south of Rwys 8 and 32.<br>Category C and D CIRCLING NA south of Rwys 8 and 26. | MISSED APPROACH: Climb to 4000<br>direct DXT NDB and hold. |
|--|--|

|                 |                                 |                   |                        |
|-----------------|---------------------------------|-------------------|------------------------|
| ASOS<br>135.375 | ALBANY APP CON<br>132.825 307.2 | CLNC DEL<br>128.6 | UNICOM<br>122.7 (CTAF) |
|-----------------|---------------------------------|-------------------|------------------------|



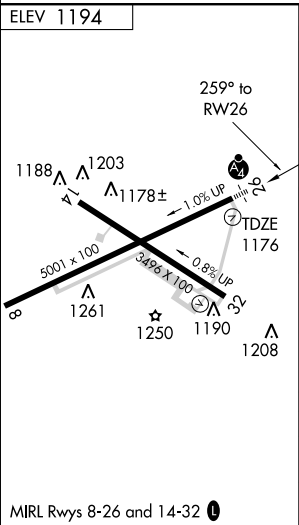
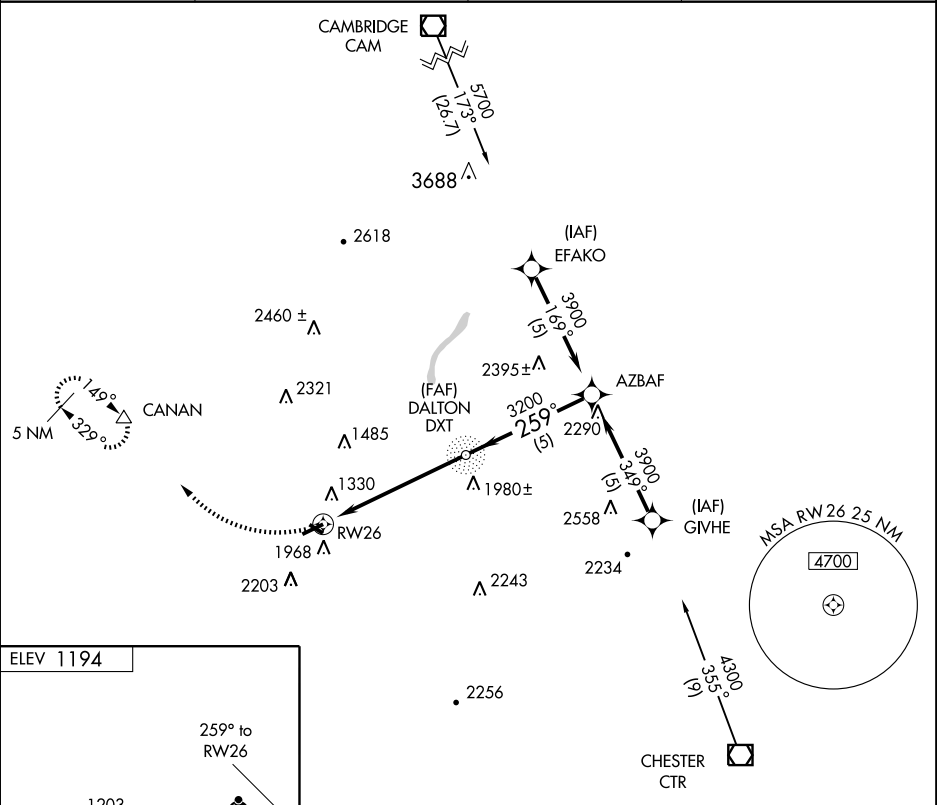
|                        |                           |                           |        |               |
|------------------------|---------------------------|---------------------------|--------|---------------|
|                        |                           |                           |        |               |
| ELEV 1194              |                           |                           |        |               |
|                        |                           |                           |        |               |
| MRL Rwy 8-26 and 14-32 |                           |                           |        |               |
| CATEGORY               | A                         | B                         | C      | D             |
| S-8                    | 2200-1¼<br>1006 (1100-1¼) | 2200-1½<br>1006 (1100-1½) | 2200-3 | 1006 (1100-3) |
| CIRCLING               | 2200-1¼<br>1006 (1100-1¼) | 2200-1½<br>1006 (1100-1½) | 2200-3 | 1006 (1100-3) |


|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 5001 |
| 259°    | TDZE     | 1176 |
|         | Apt Elev | 1194 |

GPS RWY 26  
PITTSFIELD MUNI (PSF)

|  |  |  |
|--|--|--|
|  Category A and B CIRCLING NA south of Rwys 8 and 32.<br> Category C and D CIRCLING NA south of Rwys 8 and 26. | MALSF<br> | MISSED APPROACH: Climbing right turn to 6000 direct CANAN WP and hold. |
|--|--|--|


|                 |                                 |                   |                        |
|-----------------|---------------------------------|-------------------|------------------------|
| ASOS<br>135.375 | ALBANY APP CON<br>132.825 307.2 | CLNC DEL<br>128.6 | UNICOM<br>122.7 (CTAF) |
|-----------------|---------------------------------|-------------------|------------------------|



|          |   |                               |                               |   |
|----------|---|-------------------------------|-------------------------------|---|
|          | 6000  | CANAN                         |                               | AZBAF                                   |
|          |  |                               |                               | 3900                                    |
|          | RW26  |                               | NDB                           | 259°                                    |
|          |   |                               | 3200                          | Procedure Turn NA                       |
|          |   |                               | 3.31° TCH 55                  | VGSI and descent angles not coincident. |
|          |   |                               | 5.7 NM                        | 5 NM                                    |
| CATEGORY | A   | B                             | C                             | D                                       |
| S-26     | 2000-3/4<br>824 (900-3/4)   | 2000-1 1/4<br>824 (900-1 1/4) | 2000-2 1/2<br>824 (900-2 1/2) | 2000-2 3/4<br>824 (900-2 3/4)           |
| CIRCLING | 2000-1<br>806 (900-1)   | 2000-1 1/4<br>806 (900-1 1/4) | 2000-2 1/2<br>806 (900-2 1/2) | 2200-3<br>1006 (1100-3)                 |

|   |                        |   |
|---|------------------------|---|
| LOC/DME I-EIF<br><b>108.3</b><br>Chan <b>20</b> | APP CRS<br><b>259°</b> | Rwy Idg <b>5001</b><br>TDZE <b>1176</b><br>Apt Elev <b>1194</b> |
|---|------------------------|---|

LOC RWY 26  
PITTSFIELD MUNI (PSF)

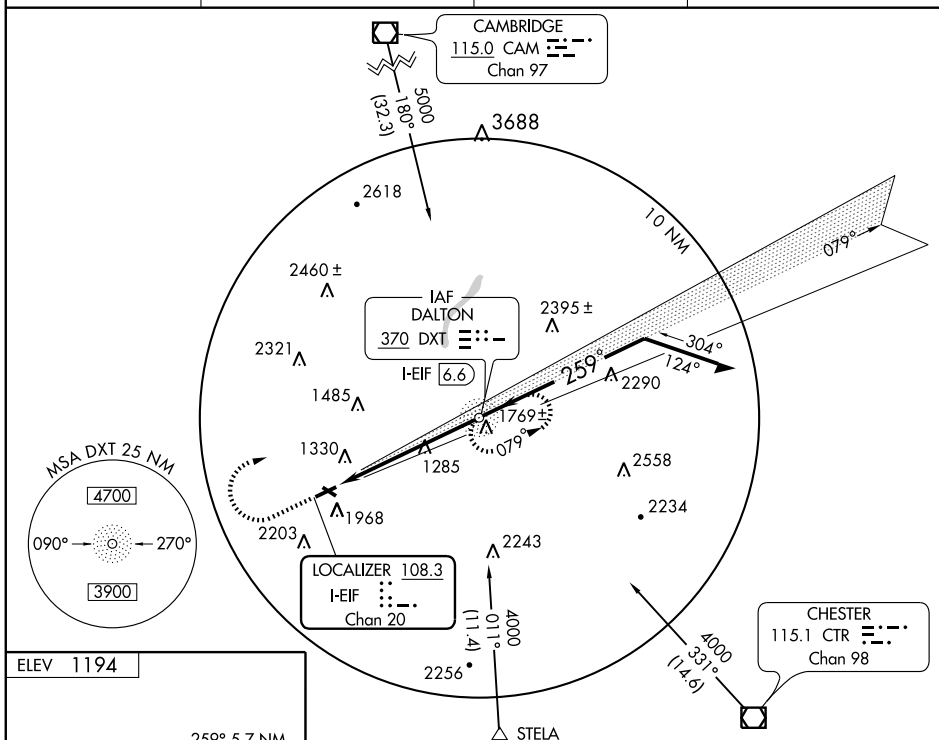
 Circling NA south of Rwy 8 and 32. If local altimeter setting not received, use Albany Intl altimeter setting and increase all MDAs 200 feet. Inoperative table does not apply.

MALSF

**MISSED APPROACH:** Climb to 2700, then climbing right turn to 4000 direct DXT NDB and hold.

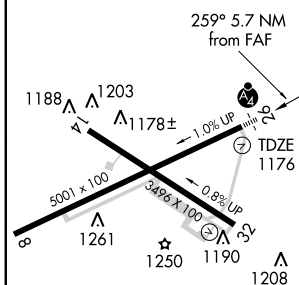
ASOS  
135.375ALBANY APP CON  
132.825 307.2CLNC DEL  
128.6

UNICOM  
122.7 (CTAF)

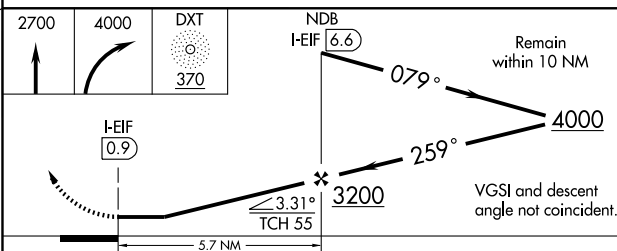


NE-1. 22 OCT 2009 to 19 NOV 2009

|      |      |
|------|------|
| ELEV | 1194 |
|------|------|



## ADF REQUIRED

MIRL Rwy 8-26 and 14-32 **L**

FAF to MAP 5.7 NM

|         |      |      |      |      |      |
|---------|------|------|------|------|------|
| Knots   | 60   | 90   | 120  | 150  | 180  |
| Min:Sec | 5:42 | 3:48 | 2:51 | 2:17 | 1:54 |

| CATEGORY | A        | B           | C                       | D                         |
|----------|----------|-------------|-------------------------|---------------------------|
| S-26     | 1880 - 1 | 704 (700-1) | 1880 - 2<br>704 (700-2) | 1880 - 2¼<br>704 (700-2¼) |
| CIRCLING | 1880 - 1 | 686 (700-1) | 1880 - 2<br>686 (700-2) | 2200-3<br>1006 (1100-3)   |



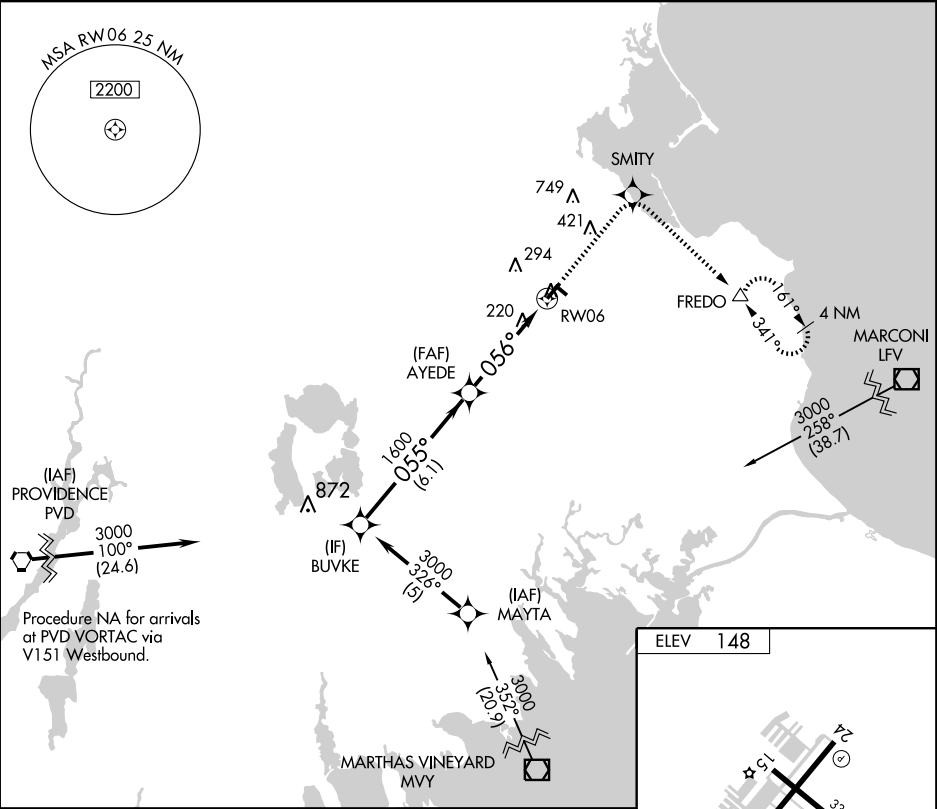
|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 4349 |
| 056°    | TDZE     | 145  |
|         | Apt Elev | 148  |

# RNAV (GPS) RWY 6

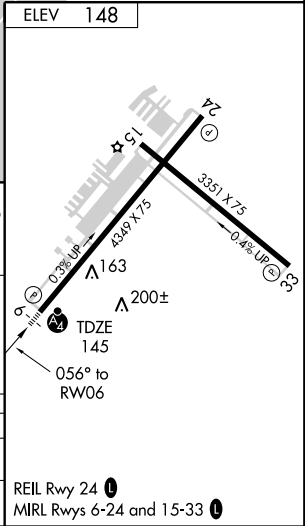
PLYMOUTH MUNI (PYM)

|  |                       |   |
|--|-----------------------|---|
| <p>▼ If local altimeter setting not received, use Taunton altimeter setting and increase all MDAs 60 feet. VDP NA when using Taunton altimeter setting. Inoperative table does not apply to LNAV Cat C. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.</p> <p>▲</p> | <p>MALSF</p> <p>▲</p> | <p>MISSED APPROACH: Climb to 1900 direct SMITY and right turn via 149° track to FREDO and hold.</p> |
|--|-----------------------|---|

|                 |                               |                    |                        |         |
|-----------------|-------------------------------|--------------------|------------------------|---------|
| ASOS<br>135.625 | CAPE APP CON ★<br>118.2 284.6 | CLNC DEL<br>127.75 | UNICOM<br>123.0 (CTAF) | 122.9 0 |
|-----------------|-------------------------------|--------------------|------------------------|---------|



|   |       |             |                        |    |
|---|-------|-------------|------------------------|----|
| <p>Procedure Turn NA</p> <p>3000</p> <p>055°</p> <p>1600</p> <p>056°</p> <p>6.1 NM</p> <p>3.2 NM</p> <p>1.2</p> <p>1900</p> <p>SMITY</p> <p>TRK 149°</p> <p>FREDO</p> <p>1.2 NM to RW06</p> <p>RW06</p> <p>3.04° TCH 50</p> |       |             |                        |    |
| CATEGORY  | A     | B           | C                      | D  |
| LNAV MDA  | 560-¾ | 415 (500-¾) | 560-1¼<br>415 (500-1¼) | NA |
| CIRCLING  | 620-1 | 472 (500-1) | 640-1½<br>492 (500-1½) | NA |



▼

▲ NA

If local altimeter setting not received, use Hyannis altimeter setting and increase all DH/MDAs 80 feet.

MALSF

MISSED APPROACH: Climb to 600 then climbing left turn to 2000 direct PVC NDB and hold.

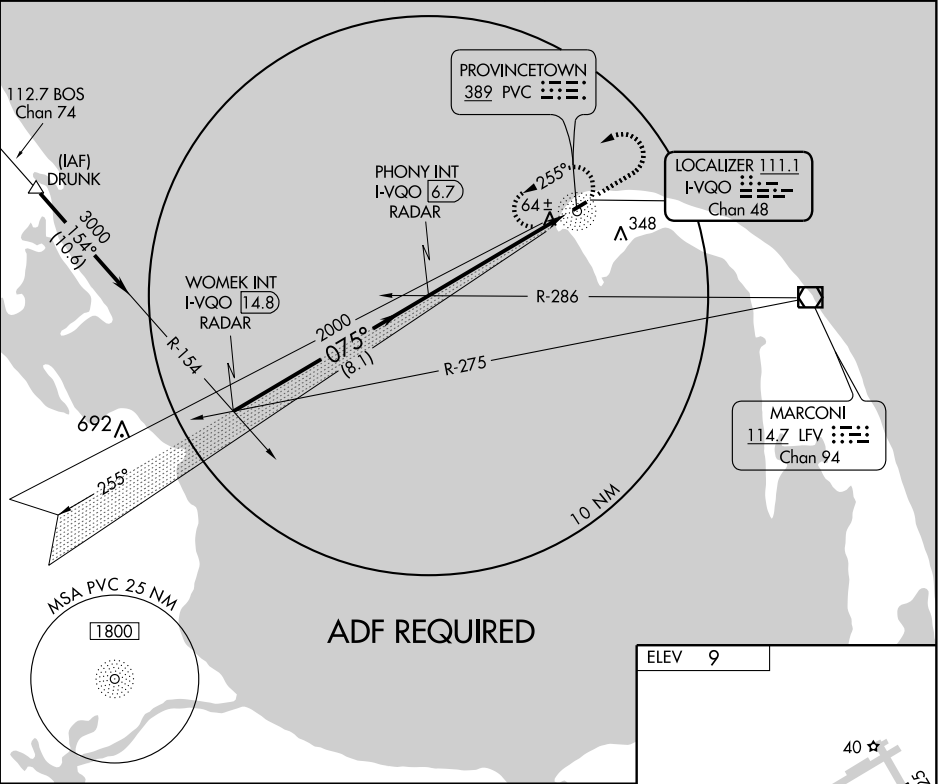
AWOS-3  
119.025

CAPE APP CON ★  
118.2

CLNC DEL  
120.65

UNICOM  
122.8 (CTAF)

122.85 0



WOMEK INT I-VQO 14.8 RADAR

PHONY INT I-VQO 6.7 RADAR

I-VQO 0.7

Procedure Turn NA

3000

075°

2000

2000

8.1 NM

6 NM

GS 3.00° TCH 40

600

2000

PVC 389

40

3500 X 100

57

TDZE 9

075° 6 NM from FAF

REIL Rwy 7 and 25

HIRL Rwy 7-25 0

| CATEGORY | A     | B           | C  | D |
|----------|-------|-------------|----|---|
| S-ILS 7  | 209-¾ | 200 (200-¾) | NA |   |
| S-LOC 7  | 320-¾ | 311 (400-¾) | NA |   |
| CIRCLING | 460-1 | 451 (500-1) | NA |   |

ELEV 9

FAF to MAP 6 NM

|         |      |      |      |      |      |
|---------|------|------|------|------|------|
| Knots   | 60   | 90   | 120  | 150  | 180  |
| Min:Sec | 6:00 | 4:00 | 3:00 | 2:24 | 2:00 |

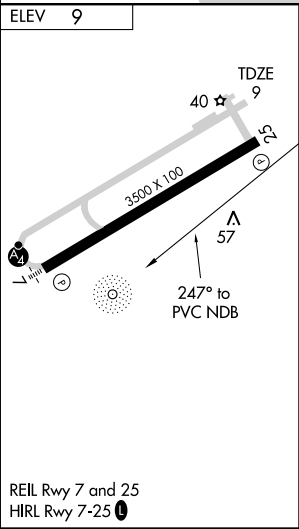
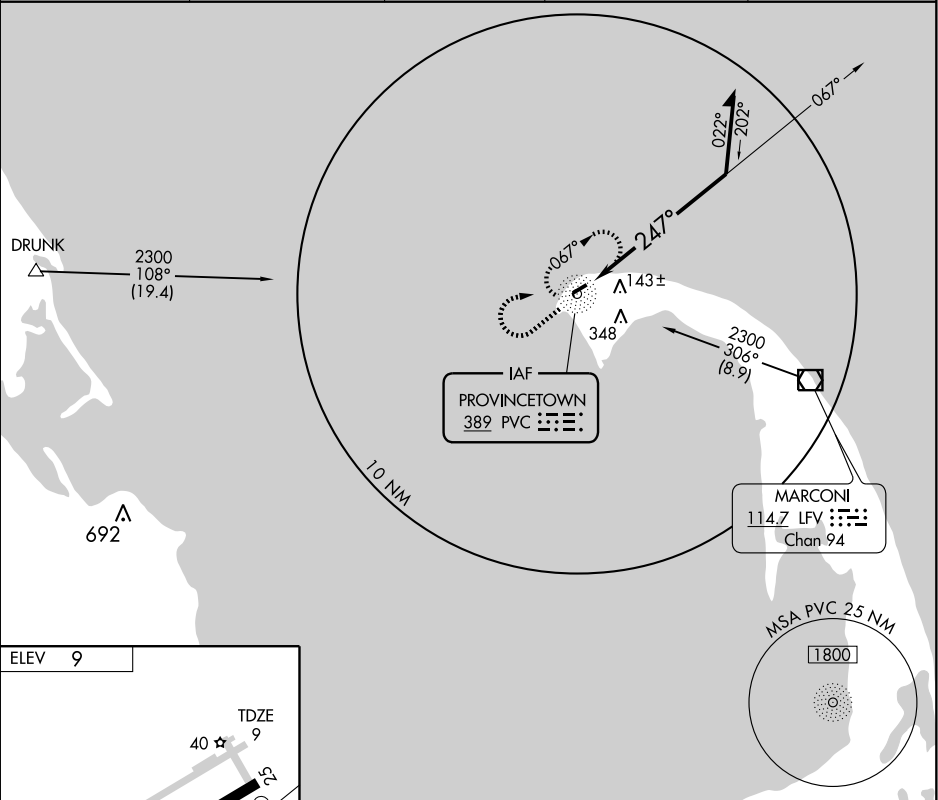


▼

If local altimeter setting not received, use Hyannis altimeter setting and increase all MDAs 80 feet.

MISSED APPROACH: Climb to 800 then climbing right turn to 2300 direct PVC NDB and hold.

|                   |                         |                    |                        |                 |
|-------------------|-------------------------|--------------------|------------------------|-----------------|
| AWOS-3<br>119.025 | CAPE APP CON ★<br>118.2 | CLNC DEL<br>120.65 | UNICOM<br>122.8 (CTAF) | 122.85 <b>0</b> |
|-------------------|-------------------------|--------------------|------------------------|-----------------|



800

2300

PVC  
389

NDB

067°

247°

1600



Remain within 10 NM

| CATEGORY | A     | B           | C  | D |
|----------|-------|-------------|----|---|
| S-25     | 500-1 | 491 (500-1) | NA |   |
| CIRCLING | 500-1 | 491 (500-1) | NA |   |

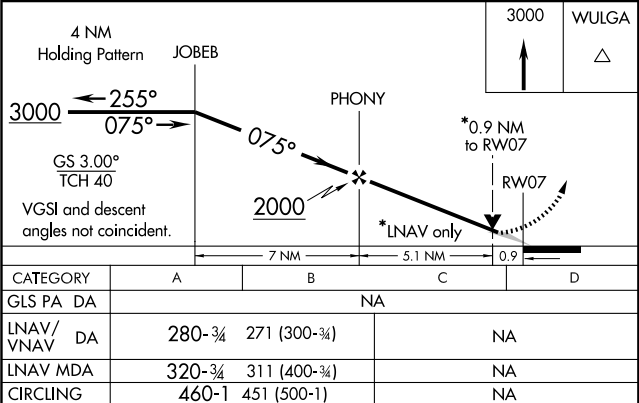
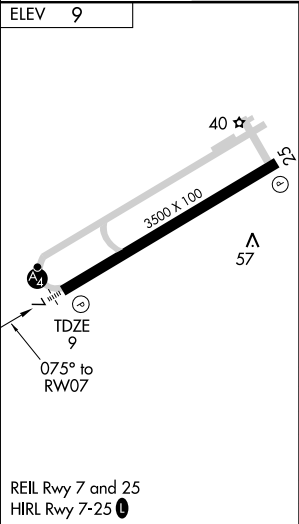
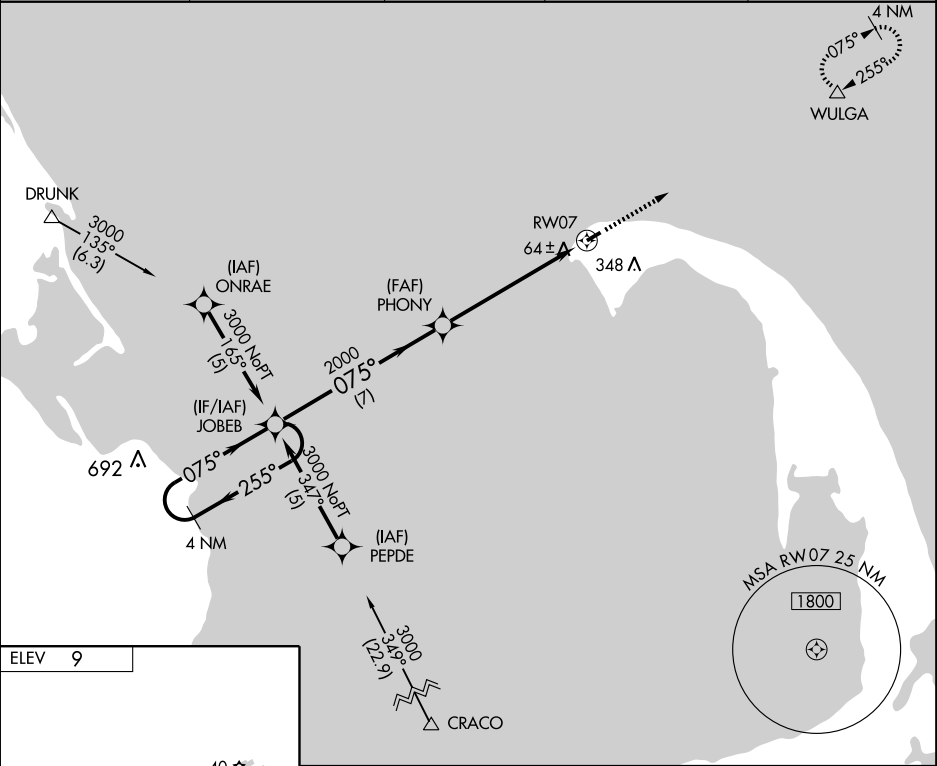
NE-1, 22 OCT 2009 to 19 NOV 2009

|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 3500 |
| 075°    | TDZE     | 9    |
|         | Apt Elev | 9    |

RNAV (GPS) RWY 7  
PROVINCETOWN MUNI (PVC)

|   |   |   |
|---|---|---|
| <p><b>▼</b> If local altimeter setting not received, use Hyannis altimeter setting and increase all DA/MDAs 80 feet.<br/><b>▲</b> NA<br/><b>W</b> BARO-VNAV NA below -15C (5°F).<br/>GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.</p> | <p>MALSF</p> <p> </p> | <p>MISSED APPROACH: Climb to 3000 direct WULGA WP and hold.</p> |
|---|---|---|


|                   |                         |                    |                        |                 |
|-------------------|-------------------------|--------------------|------------------------|-----------------|
| AWOS-3<br>119.025 | CAPE APP CON ★<br>118.2 | CLNC DEL<br>120.65 | UNICOM<br>122.8 (CTAF) | 122.85 <b>0</b> |
|-------------------|-------------------------|--------------------|------------------------|-----------------|



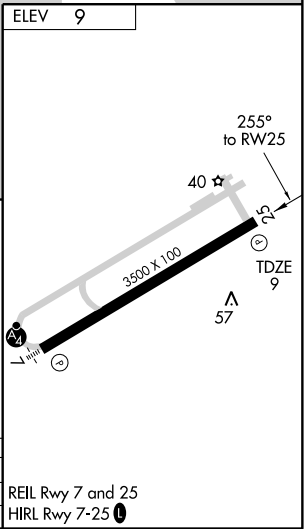
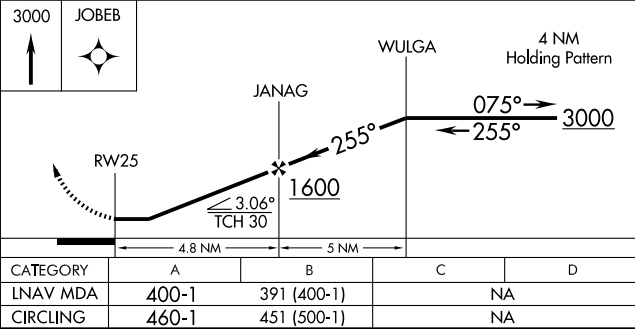
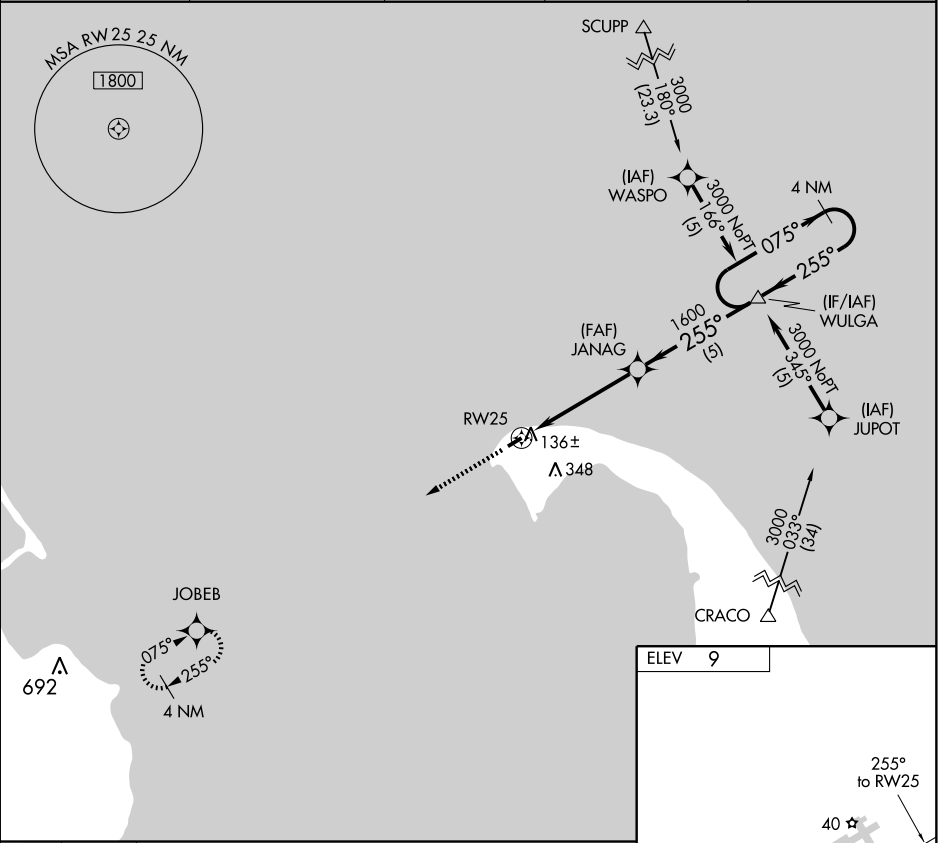
|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 3500 |
| 255°    | TDZE     | 9    |
|         | Apt Elev | 9    |

# RNAV (GPS) RWY 25

PROVINCETOWN MUNI (PVC)

|   |  |   |
|---|--|---|
| <br>NA | If local altimeter setting not received, use Hyannis altimeter setting and increase all DA/MDAs 80 feet.<br>GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. | MISSED APPROACH: Climb to 3000<br>direct JOBEB WP and hold. |
|---|--|---|

|                   |                         |                    |                        |  |
|-------------------|-------------------------|--------------------|------------------------|--|
| AWOS-3<br>119.025 | CAPE APP CON ★<br>118.2 | CLNC DEL<br>120.65 | UNICOM<br>122.8 (CTAF) | 122.85  |
|-------------------|-------------------------|--------------------|------------------------|--|



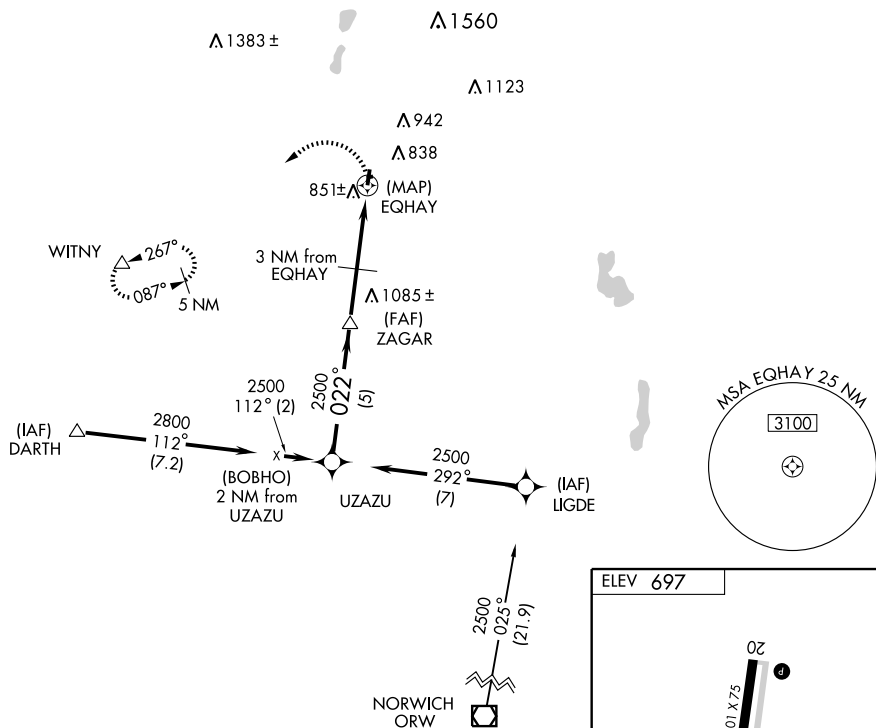
APP CRS **022°**  
Rwy Idg **3501**  
TDZE **697**  
Apt Elev **697**

Use Worcester altimeter setting.

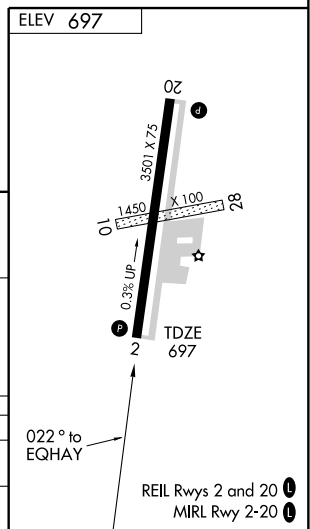
MISSED APPROACH: Climbing left turn to 3000  
direct WITNY WP and hold.

BRADLEY APP CON  
**119.0 327.1**

UNICOM  
**122.8 (CTAF) 0**



| CATEGORY | UZAZU  |             | ZAGAR                   |    | WITNY |
|----------|--------|-------------|-------------------------|----|-------|
|          | A      | B           | C                       | D  |       |
| S-2      | 1180-1 | 483 (500-1) | 1180-1¼<br>483 (500-1¼) | NA |       |
| CIRCLING | 1340-1 | 643 (700-1) | 1340-1¾<br>643 (700-1¾) | NA |       |



|  |                        |                             |  |
|--|------------------------|-----------------------------|--|
| VOR/DME PUT<br><b>117.4</b><br>Chan <b>121</b> | APP CRS<br><b>329°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>N/A</b><br><b>N/A</b><br><b>697</b> |
|--|------------------------|-----------------------------|--|

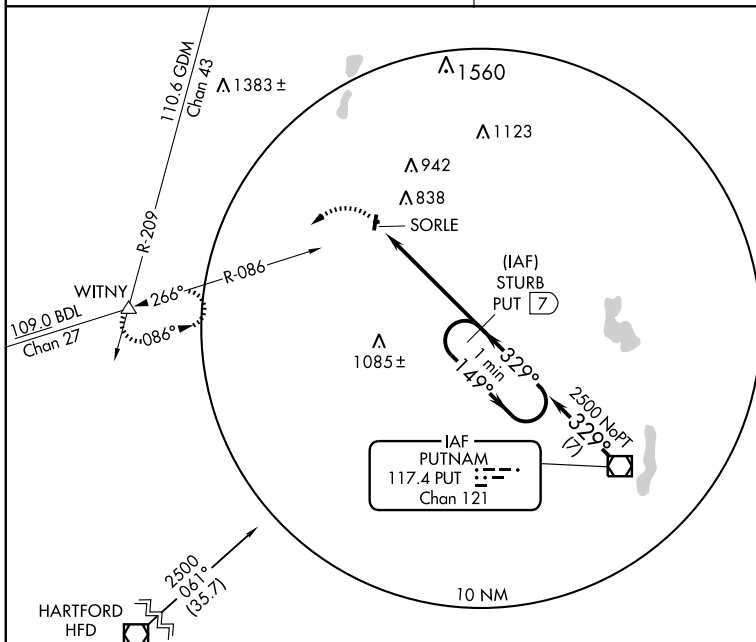
VOR/DME-B  
SOUTHBIDGE MUNI (3B0)

**T**  
**A** NA Use Worcester altimeter setting.

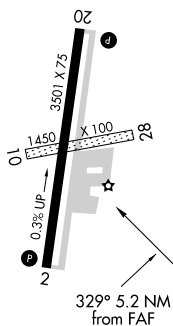
**MISSED APPROACH:** Climbing left turn to 2500 via BDL R-086 to WITNY Int and hold.

BRADLEY APP CON  
119.0 327.1

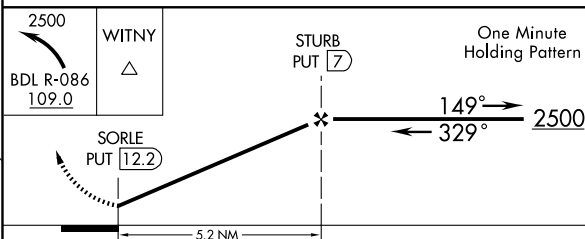
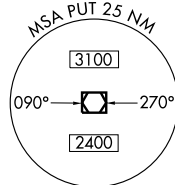
UNICOM  
122.8 (CTAF) **L**



ELEV 697



REIL Rwy 2 and 20 **L**  
MIRL Rwy 2-20 **L**



|         |    |    |     |     |     |  | CATEGORY | A                  | B | C  | D  |
|---------|----|----|-----|-----|-----|--|----------|--------------------|---|--|----|
| Knots   | 60 | 90 | 120 | 150 | 180 |  | CIRCLING | 1360-1 663 (700-1) |   | 1360-1 $\frac{1}{4}$<br>663 (700-1 $\frac{1}{4}$ ) | NA |
| Min:Sec |    |    |     |     |     |  |          |                    |   |  |    |

ATIS ★  
114.0 138.1  
WESTOVER TOWER ★  
134.85 348.75  
CTAF  
134.85  
GND CON  
118.35 275.8

42°13'N

72°33'W

SEPTEMBER 2008  
ANNUAL RATE OF CHANGE  
0.1° E

HOT  
CARGO  
AREA

EOD RANGE

PAD 19

MSA AREA

ILS  
CRITICAL  
HOLD LINE

ELEV  
241

148.4°

7082 x 150

NORTH

BASE OPS

FIRE STATION  
CONTROL TOWER

406

EAST RAMP

HANGAR

COMPASS  
ROSE

PAD 23

ELEV  
241

228.4°

1000 x 300

FIELD  
ELEV  
241

42°12'N

42°11'N

METRO-  
CIVIL  
TERMINAL

ELEV  
240

PAD 5

ELEV  
236

ELEV  
240

ILS  
CRITICAL  
HOLD LINE

RWY 5-23

S155, T250, ST175, TT380, TDT800  
PCN 44 F/A/W/T

RWY 15-33

S95, T170, ST175, TT265  
PCN 30 F/B/W/T

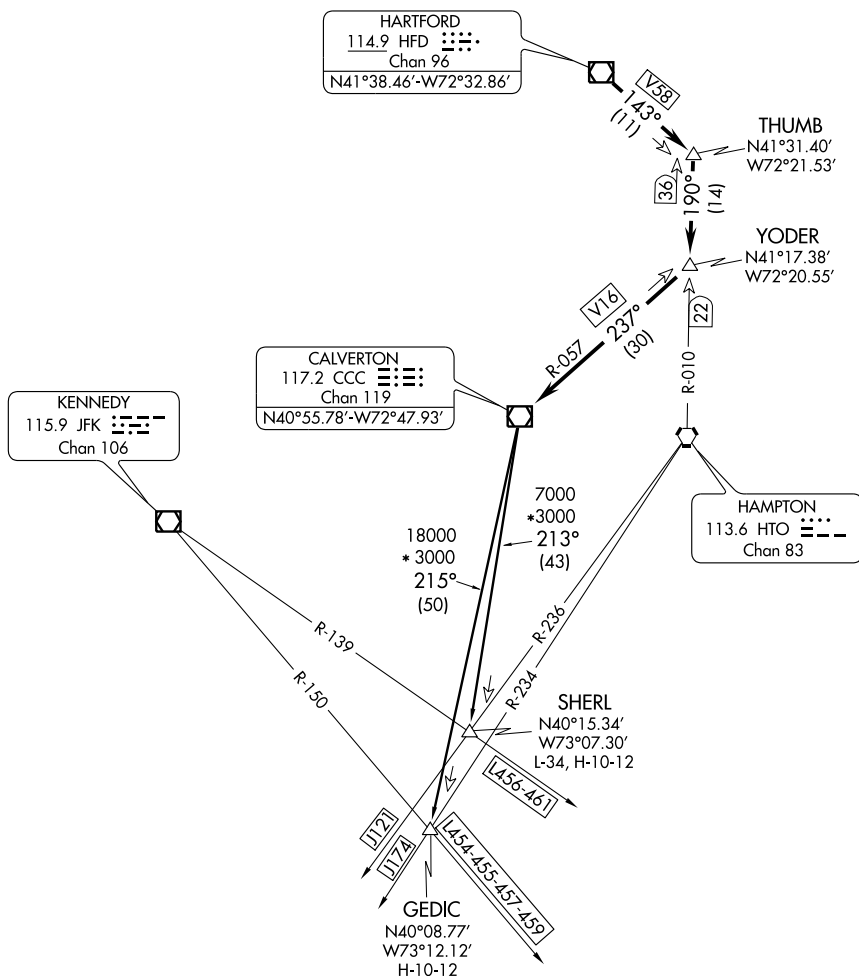
Rwy 5 ldg 10,396'

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READ BACK  
OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED

## COASTAL TWO DEPARTURE (HI)

SPRINGFIELD/CHICOPEE, MASSACHUSETTS

ATIS ★ 138.1  
 GND CON  
 118.35 275.8  
 TOWER ★  
 134.85 (CTAF) 348.75  
 BRADLEY DEP CON  
 125.35 281.5



NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)



## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to HFD VOR/DME. Thence. . . .

. . . . From over HFD VOR/DME proceed via the HFD R-143 to THUMB INT, then proceed via the HTO R-010 to YODER INT, then via the CCC R-057 to CCC VOR/DME. Then via (transition) or (assigned route). Expect clearance to requested flight level ten (10) minutes after departure.

GEDIC TRANSITION (CSTL2.GEDIC): From over CCC VOR/DME via CCC R-215 to GEDIC INT.

SHERL TRANSITION (CSTL2.SHERL): From over CCC VOR/DME via CCC R-213 to SHERL INT.



## DEER PARK TWO ARRIVAL

WINDSOR LOCKS, CONNECTICUT

BRADLEY APP CON  
123.95 348.3  
ATIS  
118.15

BARNES  
MUNI

WESTOVER ARB/  
METROPOLITAN

BRADLEY  
INTL

LOCALIZER 111.1  
I-BDL  
Chan 48  
N41°57.30'-W72°39.99'

BRISS  
N41°42.08'  
W73°00.94'

MADISON  
110.4 MAD  
Chan 41  
N41°18.83'-W72°41.53'

Expect to cross  
at 11,000'.

CARMEL  
116.6 CMK  
Chan 113

11000  
053°  
(42)

DEER PARK  
117.7 DPK  
Chan 124

N40°47.51'-W73°18.22'  
L-33-34, H-10-12

NOTE: Chart not to scale.

From over DPK VORTAC via DPK R-053 and MAD R-235 to MAD VOR/DME, thence from MAD VOR/DME via MAD R-341 to BRISS INT. Expect radar vectors to final approach course prior to BRISS INT when landing other than Bradley Runway 6.

|              |             |                       |               |                                  |
|--------------|-------------|-----------------------|---------------|----------------------------------|
| LOC I-GWJ    | APCH CRS    | Rwy Idg <b>10,396</b> |               |                                  |
| <b>109.9</b> | <b>048°</b> | TDZE <b>237</b>       | AL-447 [USAF] | WESTOVER ARB/METROPOLITAN (KCEF) |
|              |             | Arpt Elev <b>241</b>  |               |                                  |

**CAUTION:** IFR operations prohibited to Rwy 33 at night.

\*\* When ALS inop, increase CAT ABC RVR to 50 and vis to 1 mile, CAT DE RVR to 60 and vis to 1 1/4 miles.

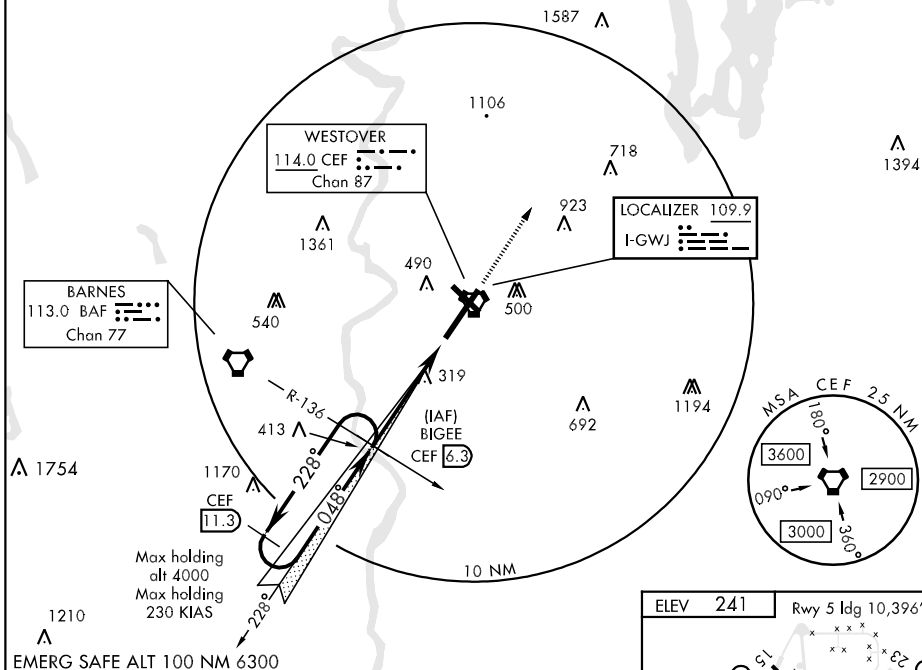
ALSF-1



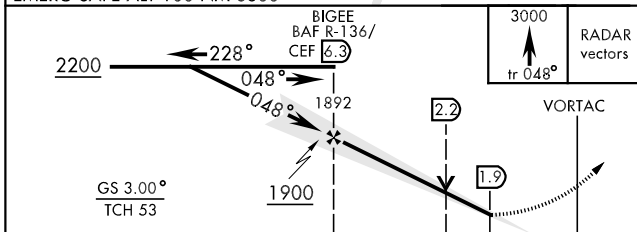
MISSED APPROACH: Climb to 3000 tracking 048°, expect RADAR vectors.

|                       |                                 |  |                         |
|-----------------------|---------------------------------|--|-------------------------|
| ATIS ★<br>114.0 138.1 | BRADLEY APP CON<br>125.35 281.5 | WESTOVER TOWER ★<br>134.85 (CTAF) 348.75 | GND CON<br>118.35 275.8 |
|-----------------------|---------------------------------|--|-------------------------|

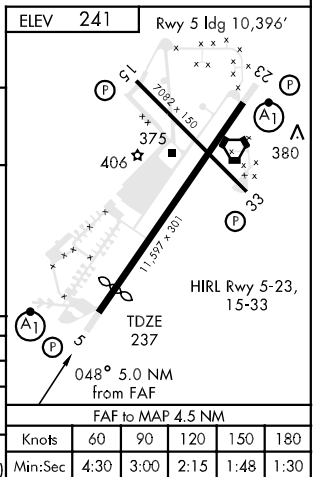
## RADAR REQUIRED



EMERG SAFE ALT 100 NM 6300



| CATEGORY   | A      | B           | C                      | D                    | E                      |
|------------|--------|-------------|------------------------|----------------------|------------------------|
| S-ILS 5 *  | 437/24 |             | 200                    | (200-½)              |                        |
| S-LOC 5 ** | 580/24 | 343 (400-½) | 580/40                 | 343                  | (400-¾)                |
| CIRCLING   | 800-1  | 559 (600-1) | 800-1½<br>559 (600-1½) | 800-2<br>559 (600-2) | 1240-3<br>999 (1000-3) |



|              |             |                       |               |                                  |
|--------------|-------------|-----------------------|---------------|----------------------------------|
| LOC I-CEF    | APCH CRS    | Rwy Idg <b>11,597</b> | AL-447 [USAF] | WESTOVER ARB/METROPOLITAN (KCEF) |
| <b>109.9</b> | <b>228°</b> | TDZE <b>241</b>       |               |                                  |
|              |             | Arpt Elev <b>241</b>  |               |                                  |

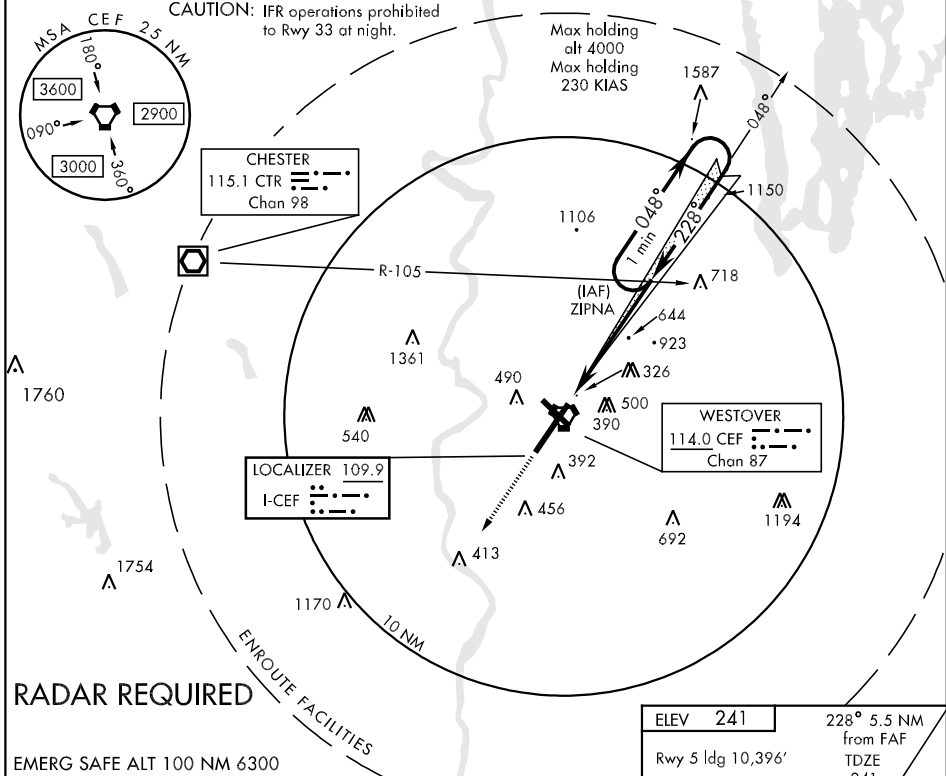
**V** \* When ALS inop, increase RVR to 40 and vis to  $\frac{3}{4}$  mile.  
 \*\* When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile,  
 CAT C vis to  $1\frac{3}{4}$  miles, CAT D vis to 2 miles, CAT E vis to  $2\frac{1}{2}$  miles.



MISSED APPROACH: Climb to 3000 tracking 228°, expect RADAR vectors.

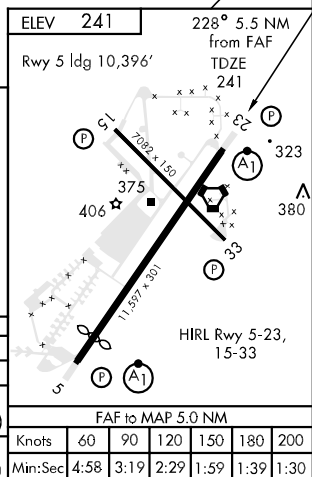
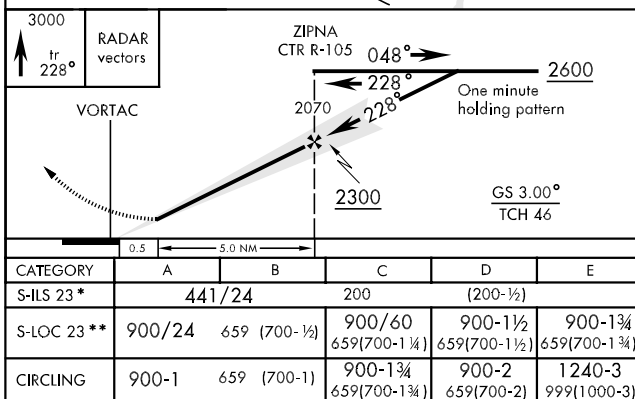
|                                     |   |  |                                       |
|-------------------------------------|---|--|---------------------------------------|
| <b>ATIS ★</b><br><b>114.0 138.1</b> | <b>BRADLEY APP CON</b><br><b>125.35 281.5</b> | <b>WESTOVER TOWER ★</b><br><b>134.85 (CTAF) 348.75</b> | <b>GND CON</b><br><b>118.35 275.8</b> |
|-------------------------------------|---|--|---------------------------------------|

**CAUTION:** IFR operations prohibited to Rwy 33 at night.



## RADAR REQUIRED

EMERG SAFE ALT 100 NM 6300



|                           |                         |  |
|---------------------------|-------------------------|--|
| LOC I-CEF<br><b>109.9</b> | APCH CRS<br><b>228°</b> | Rwy ldg <b>11,597</b><br>TDZE <b>241</b><br>Arpt Elev <b>241</b> |
|---------------------------|-------------------------|--|

AL-447 [USAF]

WESTOVER ARB/METROPOLITAN (KCEF)

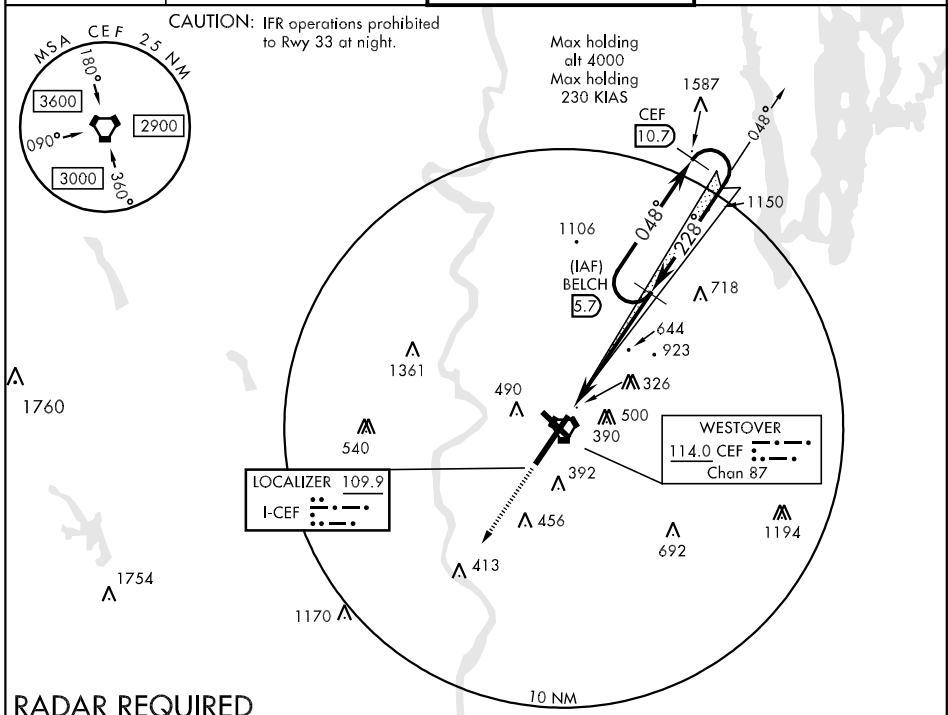
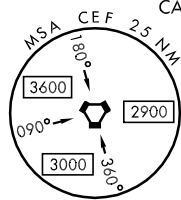
**▼** \* When ALS inop, increase RVR to 40 and vis to ¾ mile.  
 \*\* When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile,  
 CAT C RVR to 60 vis to 1¼ miles, CAT DE vis to 1½ miles.



**MISSED APPROACH:** Climb to 3000  
 tracking 228°, expect RADAR vectors.

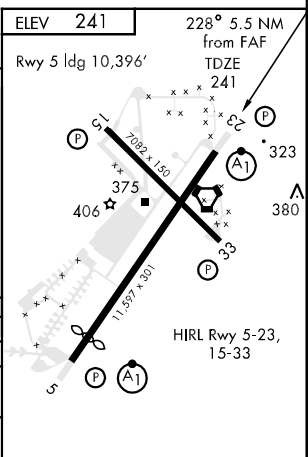
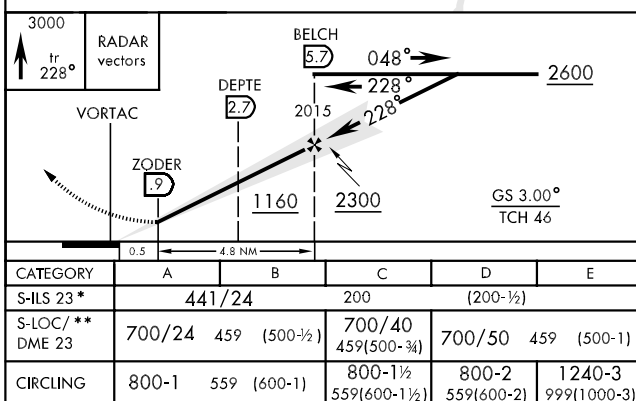
|                              |  |   |                                |
|------------------------------|--|---|--------------------------------|
| ATIS ★<br><b>114.0 138.1</b> | BRADLEY APP CON<br><b>125.35 281.5</b> | WESTOVER TOWER ★<br><b>134.85 (CTAF) 348.75</b> | GND CON<br><b>118.35 275.8</b> |
|------------------------------|--|---|--------------------------------|

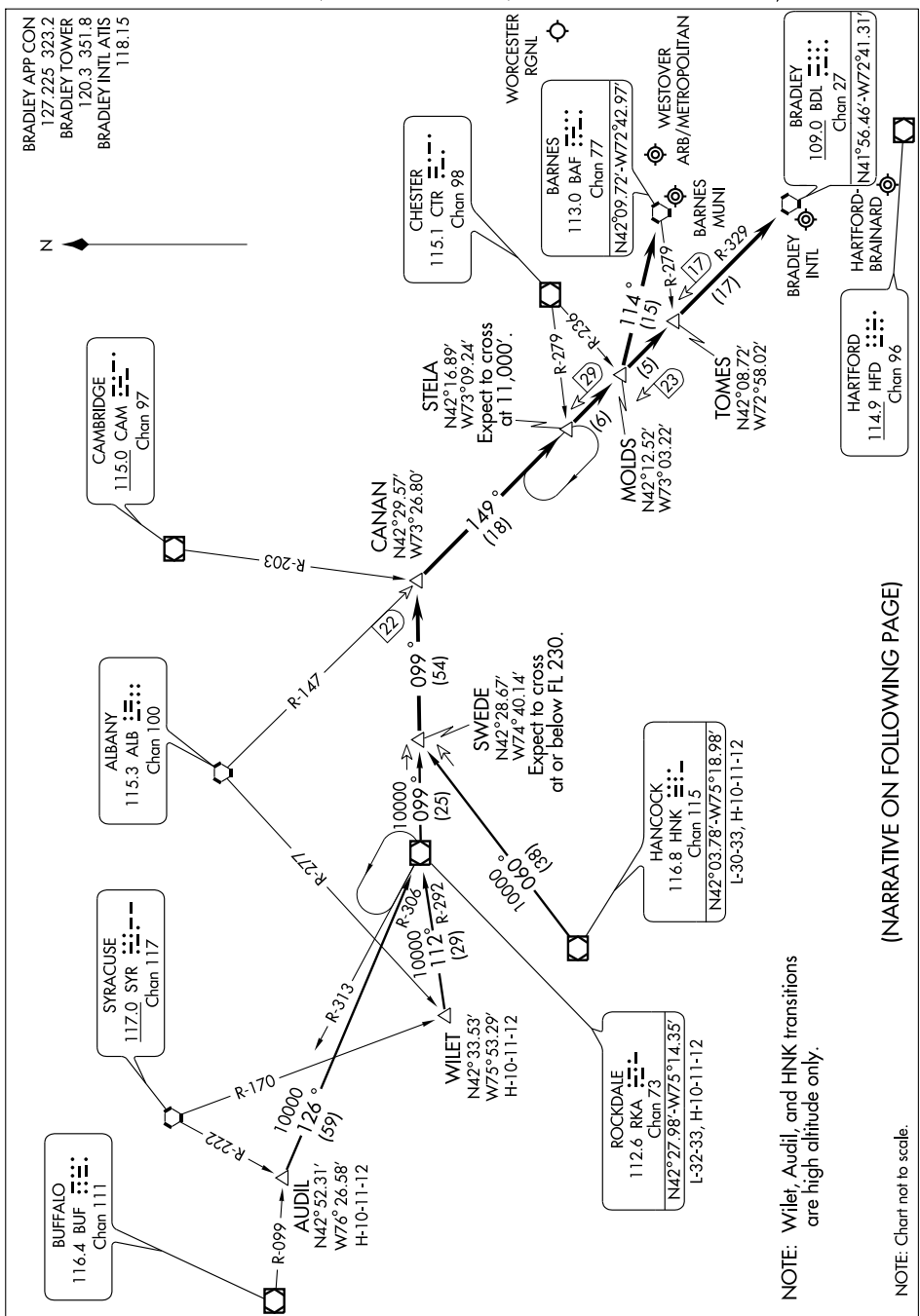
**CAUTION:** IFR operations prohibited  
 to Rwy 33 at night.



**RADAR REQUIRED**

EMERG SAFE ALT 100 NM 6300





(NARRATIVE ON FOLLOWING PAGE)

## ARRIVAL DESCRIPTION

AUDIL TRANSITION (AUDIL.SWEDE1): From over AUDIL INT via RKA R-306 to RKA VOR/DME; then via RKA R-099 to SWEDE INT. Thence. . . .

HANCOCK TRANSITION (HNK.SWEDE1): From over HNK VOR/DME via HNK R-060 to SWEDE INT. Thence. . . .

ROCKDALE TRANSITION (RKA.SWEDE1): From over RKA VOR/DME via RKA R-099 to SWEDE INT. Thence. . . .

WILET TRANSITION (WILET.SWEDE1): From over WILET INT via RKA R-292 to RKA VOR/DME; then via RKA R-099 TO SWEDE INT. Thence. . . .

ARRIVALS FOR BRADLEY INTL and HARTFORD-BRAINARD

. . . . From over SWEDE INT via RKA R-099 to CANAN INT. Then via BDL R-329 to BDL VORTAC. Expect radar vectors to final approach course.

ARRIVALS FOR BARNES MUNI, WESTOVER ARB/METROPOLITAN and WORCESTER RGNL

. . . . From over SWEDE INT via RKA R-099 to CANAN INT. Then via BDL R-329 to MOLDS INT. Then direct to BAF VORTAC. Expect radar vectors to final approach course.

WESTOVER ARB/METROPOLITAN (KCEF)

**MISSED APPROACH:** Climb to 2600 via CEF then R-042 to DECCO and hold.

GND CON  
118.35 275.8



ELEV 241 Rwy 5 ldg 10,396'

7092 x 150

375

406

11,597 x 301

330

TDZE 237

053° 4.9 NM from FAF

HIRL Rwy 5-23, 15-33

|  |                         |  |
|--|-------------------------|--|
| VORTAC CEF<br><b>114.0</b><br>Chan <b>87</b> | APCH CRS<br><b>222°</b> | Rwy Idg <b>11,597</b><br>TDZE <b>241</b><br>Arpt Elev <b>241</b> |
|--|-------------------------|--|

AL-447 [USAF]

WESTOVER ARB/METROPOLITAN (KCEF)

**CAUTION:** IFR operations prohibited to Rwy 33 at night.

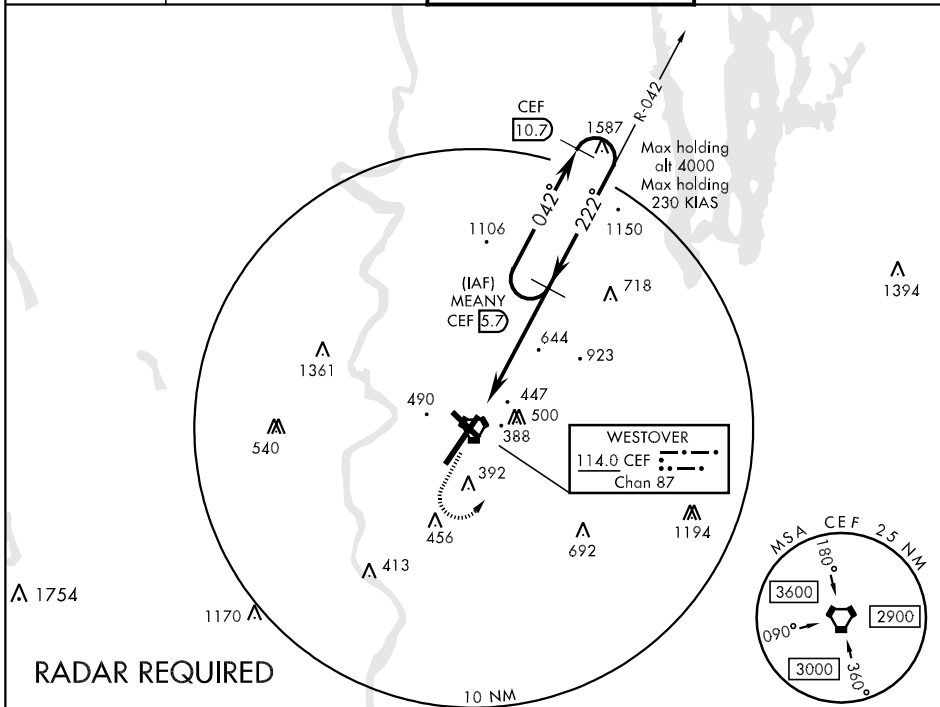
\* When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT C RVR to 60 and vis to 1½ miles, CAT DE vis to 1½ miles.

ALS-1



**MISSED APPROACH:** Climb to 2600 tracking 228°, passing 1200, turn left direct MEANY and hold.

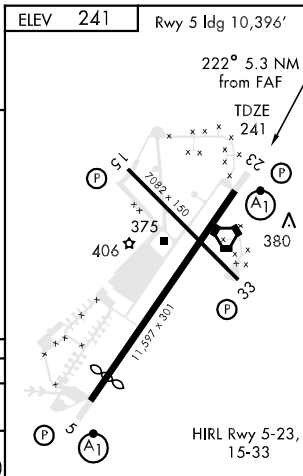
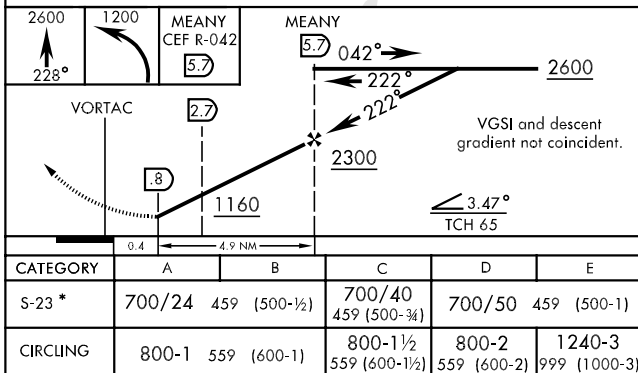
|                              |  |   |                                |
|------------------------------|--|---|--------------------------------|
| ATIS ★<br><b>114.0 138.1</b> | BRADLEY APP CON<br><b>125.35 281.5</b> | WESTOVER TOWER ★<br><b>134.85 (CTAF) 348.75</b> | GND CON<br><b>118.35 275.8</b> |
|------------------------------|--|---|--------------------------------|



## RADAR REQUIRED

1210  
A

EMERG SAFE ALT 100 NM 6300





|  |                         |  |
|--|-------------------------|--|
| VORTAC CEF<br><b>114.0</b><br>Chan <b>87</b> | APCH CRS<br><b>222°</b> | Rwy ldg <b>11,597</b><br>TDZE <b>241</b><br>Arpt Elev <b>241</b> |
|--|-------------------------|--|

AL-447 [USAF]

WESTOVER ARB/METROPOLITAN (KCEF)

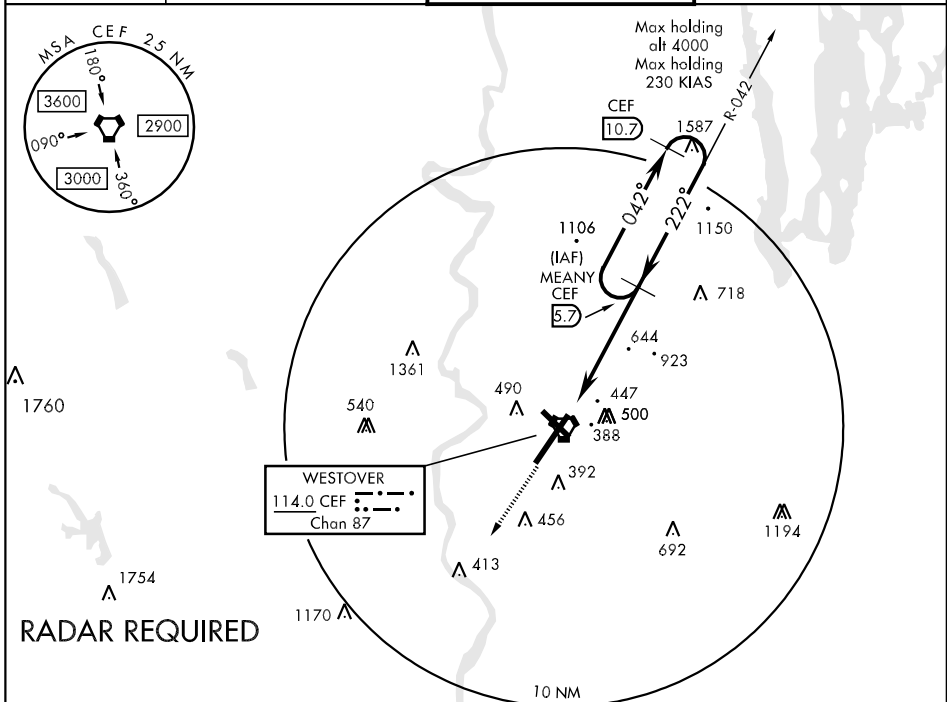
\* When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile,  
CAT C RVR to 60 and vis to 1½ miles, CAT DE vis to 1½ miles.  
CAUTION: IFR operations prohibited to Rwy 33 at night.

ALSF-1



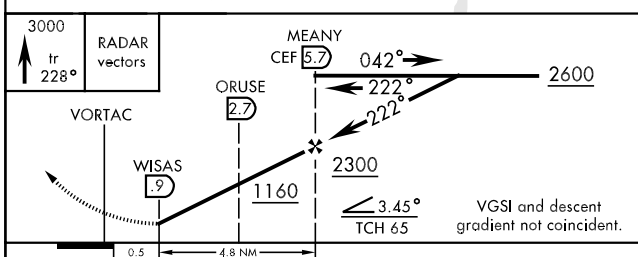
MISSED APPROACH: Climb to 3000  
tracking 228°, expect RADAR vectors.

|                              |  |   |                                |
|------------------------------|--|---|--------------------------------|
| ATIS ★<br><b>114.0 138.1</b> | BRADLEY APP CON<br><b>125.35 281.5</b> | WESTOVER TOWER ★<br><b>134.85 (CTAF) 348.75</b> | GND CON<br><b>118.35 275.8</b> |
|------------------------------|--|---|--------------------------------|

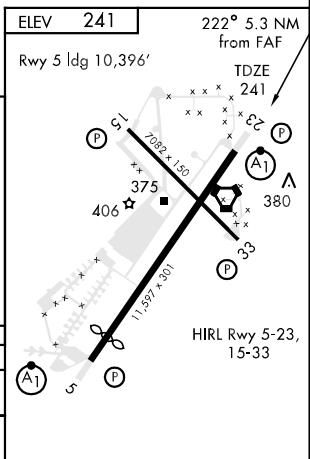


RADAR REQUIRED

EMERG SAFE ALT 100 NM 6300

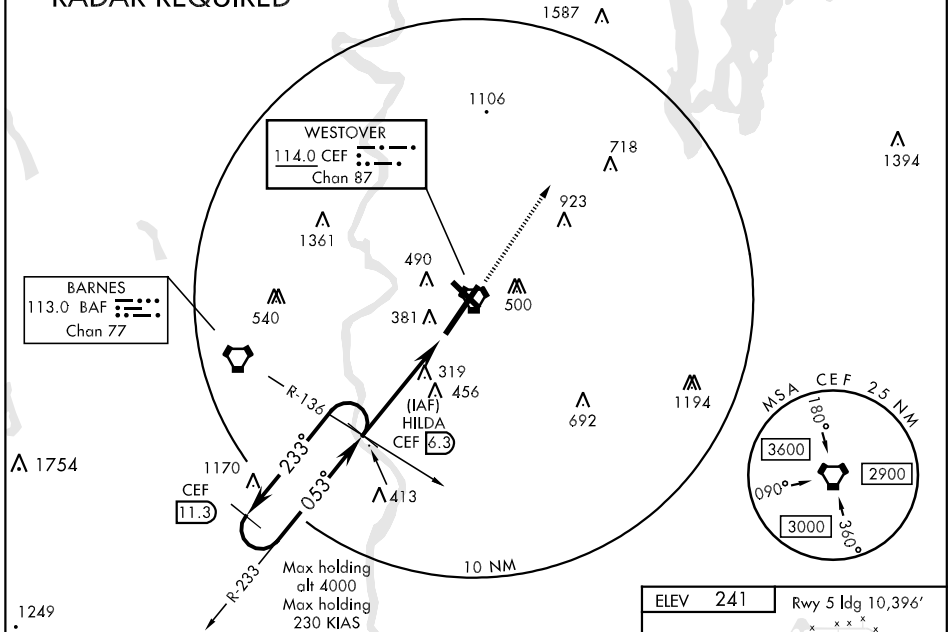


| CATEGORY           | A                  | B                  | C                 | D                  | E |
|--------------------|--------------------|--------------------|-------------------|--------------------|---|
| S-VOR/ *<br>DME 23 | 700/24 459 (500-½) | 700/40 459(500-¾)  | 700/50 459(500-1) |                    |   |
| CIRCLING           | 800-1 559 (600-1)  | 800-1½ 559(600-1½) | 800-2 559(600-2)  | 1240-3 999(1000-3) |   |

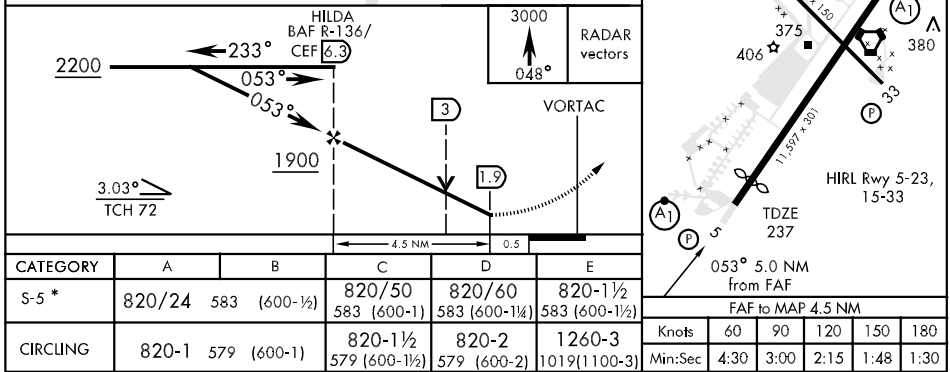


|                       |                                 |  |                         |
|-----------------------|---------------------------------|--|-------------------------|
| ATIS ★<br>114.0 138.1 | BRADLEY APP CON<br>125.35 281.5 | WESTOVER TOWER ★<br>134.85 (CTAF) 348.75 | GND CON<br>118.35 275.8 |
|-----------------------|---------------------------------|--|-------------------------|

## RADAR REQUIRED



EMERG SAFE ALT 100 NM 6300



VORTAC CEF  
**114.0**  
 Chan **87**

APCH CRS  
**222°**

Rwy ldg **11,597**  
 TDZE **241**  
 Arpt Elev **241**

AL-447 [USAF]

WESTOVER ARB/METROPOLITAN (KCEF)

\* When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile,  
 CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2½ miles.  
 CAUTION: IFR operations prohibited to Rwy 33 at night

ALSF-1



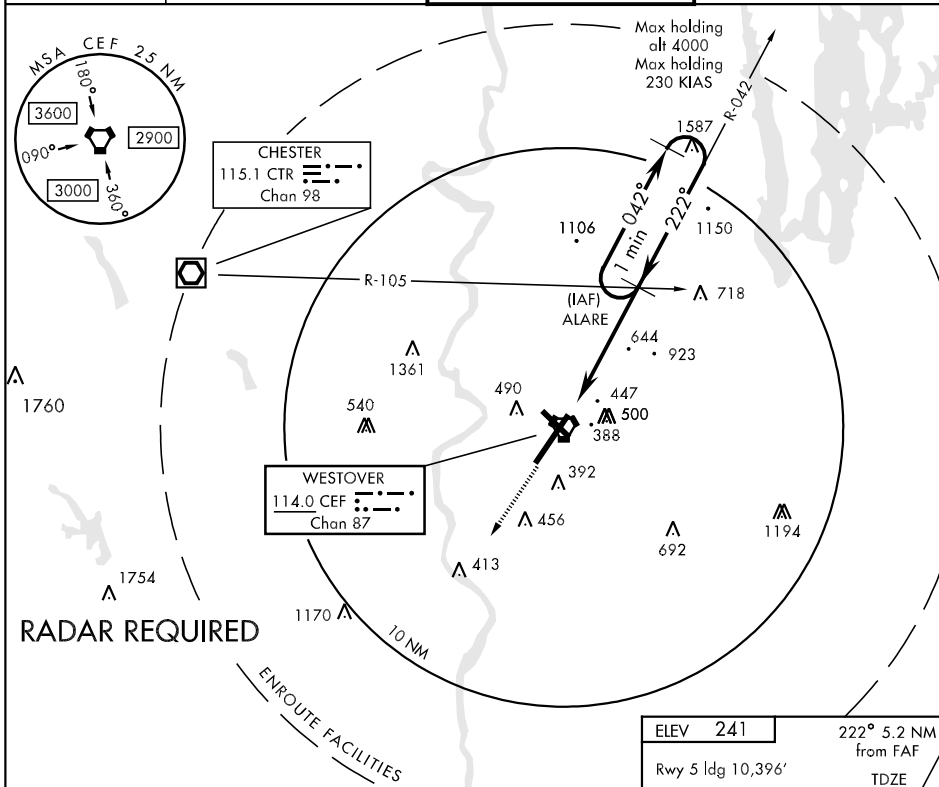
MISSED APPROACH: Climb to 3000  
 tracking 228°, expect RADAR vectors.

ATIS ★ **114.0 138.1**

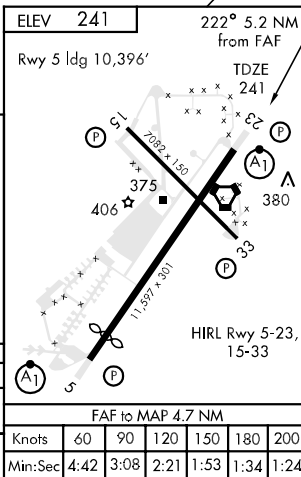
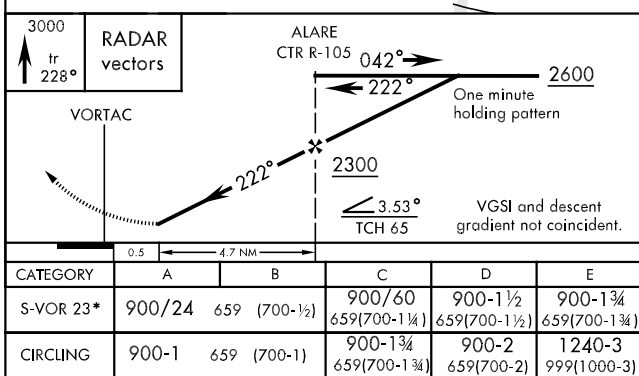
BRADLEY APP CON **125.35 281.5**

WESTOVER TOWER ★ **134.85 (CTAF) 348.75**

GND CON **118.35 275.8**



EMERG SAFE ALT 100 NM 6300



|                      |                        |                             |  |
|----------------------|------------------------|-----------------------------|--|
| LOM BE<br><b>332</b> | APP CRS<br><b>275°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>N/A</b><br><b>N/A</b><br><b>268</b> |
|----------------------|------------------------|-----------------------------|--|

## NDB or GPS-A

STOW/MINUTE MAN AIRFIELD (6B6)



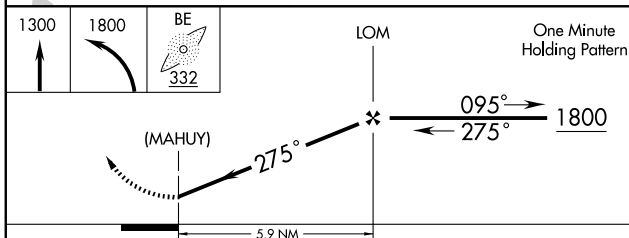
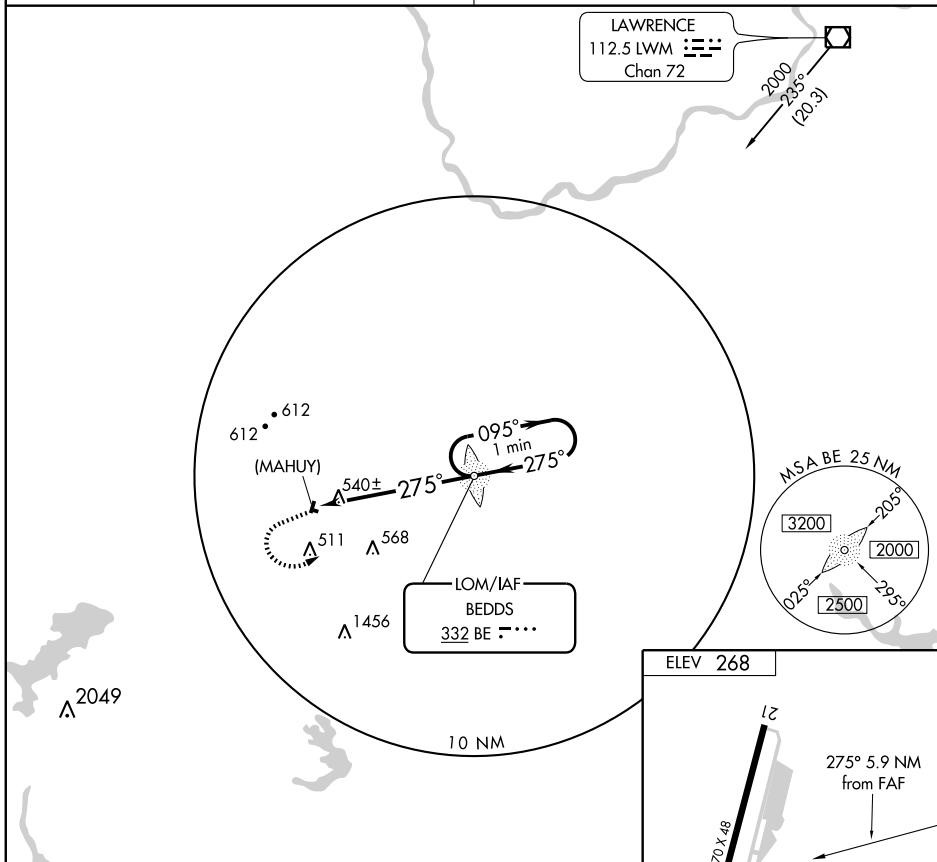
Use Bedford, MA altimeter setting. When Bedford control zone not effective, use Boston, MA altimeter setting and increase all MDA's 60 feet.

**MISSED APPROACH:** Climb to 1300 then climbing left turn to 1800 direct BE LOM and hold.



Circling NA at night.

|                               |                          |
|-------------------------------|--------------------------|
| BOSTON APP CON<br>124.4 279.6 | UNICOM<br>122.8 (CTAF) 0 |
|-------------------------------|--------------------------|



| CATEGORY | A      | B           | C  | D | FAF to MAP 5.9 NM |      |      |      |      |      |
|----------|--------|-------------|----|---|-------------------|------|------|------|------|------|
| CIRCLING | 1000-1 | 732 (800-1) | NA |   | Knots             | 60   | 90   | 120  | 150  | 180  |
|          |        |             |    |   | Min:Sec           | 5:54 | 3:56 | 2:57 | 2:22 | 1:58 |

|             |         |          |      |
|-------------|---------|----------|------|
| VOR/DME MHT | APP CRS | Rwy Idg  | 2770 |
| 114.4       | 210°    | TDZE     | 268  |
| Chan 91     |         | Apt Elev | 268  |

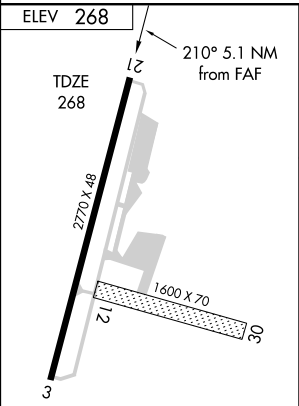
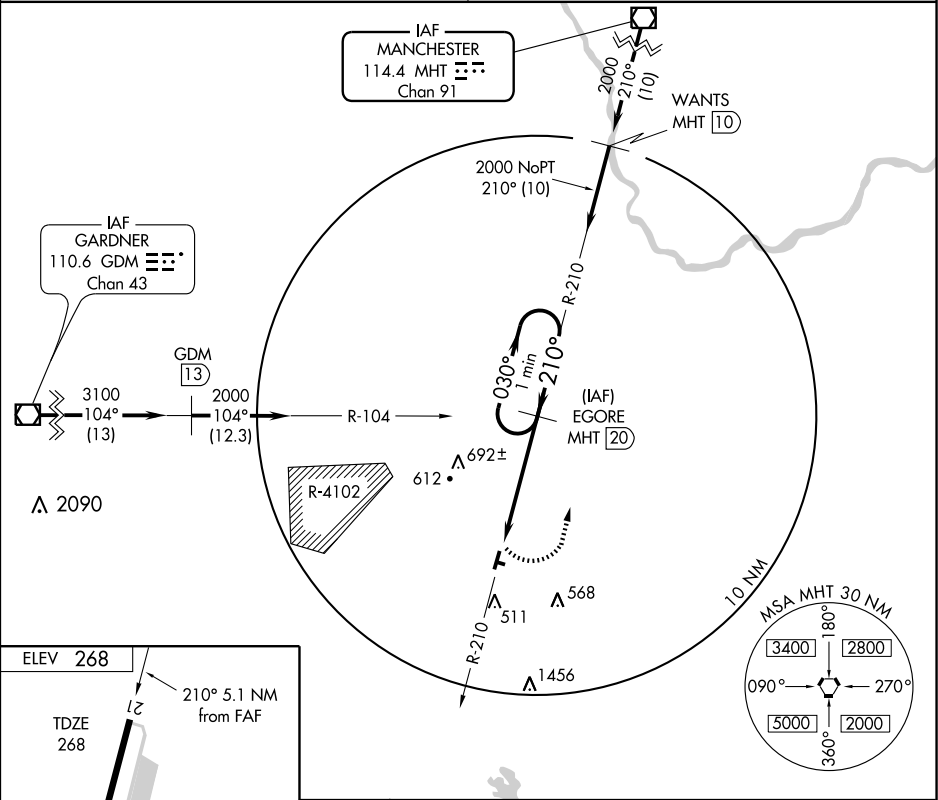
VOR/DME RWY 21  
STOW/MINUTE MAN AIRFIELD (6B6)

**T** Use Bedford altimeter setting; when Bedford control zone not in effect, use Boston altimeter setting and increase all MDA's 60 feet.

**A NA** Circling NA at night.

MISSED APPROACH: Climbing left turn to 2000 via MHT R-210 to EGORE 20 DME and hold.

|                               |                                 |
|-------------------------------|---------------------------------|
| BOSTON APP CON<br>124.4 279.6 | UNICOM<br>122.8 (CTAF) <b>0</b> |
|-------------------------------|---------------------------------|





|                      |    |    |     |     |     |
|----------------------|----|----|-----|-----|-----|
| REIL Rwy 21 <b>0</b> |    |    |     |     |     |
|                      |    |    |     |     |     |
| Knots                | 60 | 90 | 120 | 150 | 180 |
| Min:Sec              |    |    |     |     |     |

|  |                      |                          |    |   |
|--|----------------------|--------------------------|----|---|
| <p>2000<br/>MHT R-210<br/>114.4</p> <p>EGORE<br/>MHT 20</p> <p>One Minute<br/>Holding Pattern</p> <p>030°<br/>210°</p> <p>2000</p> <p>210°</p> <p>5.1 NM</p> |                      |                          |    |   |
| CATEGORY   | A                    | B                        | C  | D |
| S-21   | 980-1<br>712 (800-1) | 980-1 ¼<br>712 (800-1 ¼) | NA |   |
| CIRCLING   | 980-1<br>712 (800-1) | 980-1 ¼<br>712 (800-1 ¼) | NA |   |

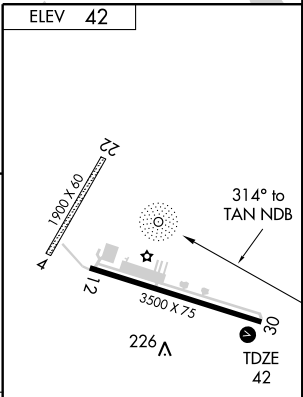
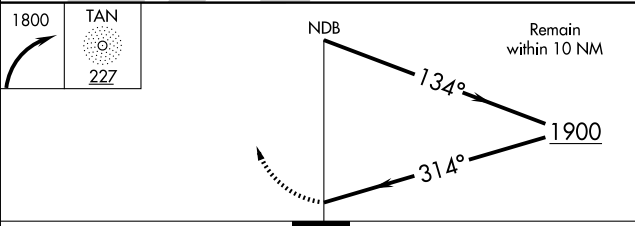
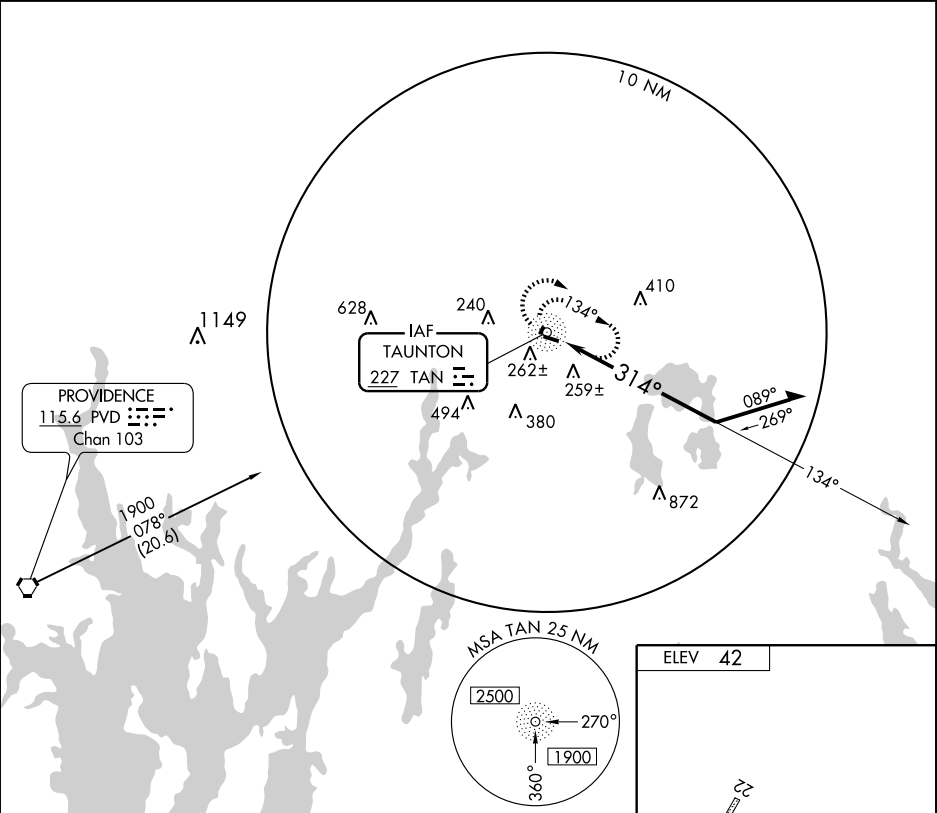
|            |             |          |           |
|------------|-------------|----------|-----------|
| NDB TAN    | APP CRS     | Rwy Idg  | 3500      |
| <u>227</u> | <b>314°</b> | TDZE     | <b>42</b> |
|            |             | Apt Elev | <b>42</b> |

# NDB or GPS RWY 30

TAUNTON MUNI - KING FIELD (TAN)

|   |  |
|---|--|
| <br> NA | MISSED APPROACH: Climbing right turn to 1800 in TAN NDB holding pattern. |
|---|--|

|                        |   |                                 |
|------------------------|---|---------------------------------|
| ASOS<br><b>132.675</b> | PROVIDENCE APP CON*<br><b>128.7 269,525</b> | UNICOM<br><b>122.7 (CTAF) 0</b> |
|------------------------|---|---------------------------------|

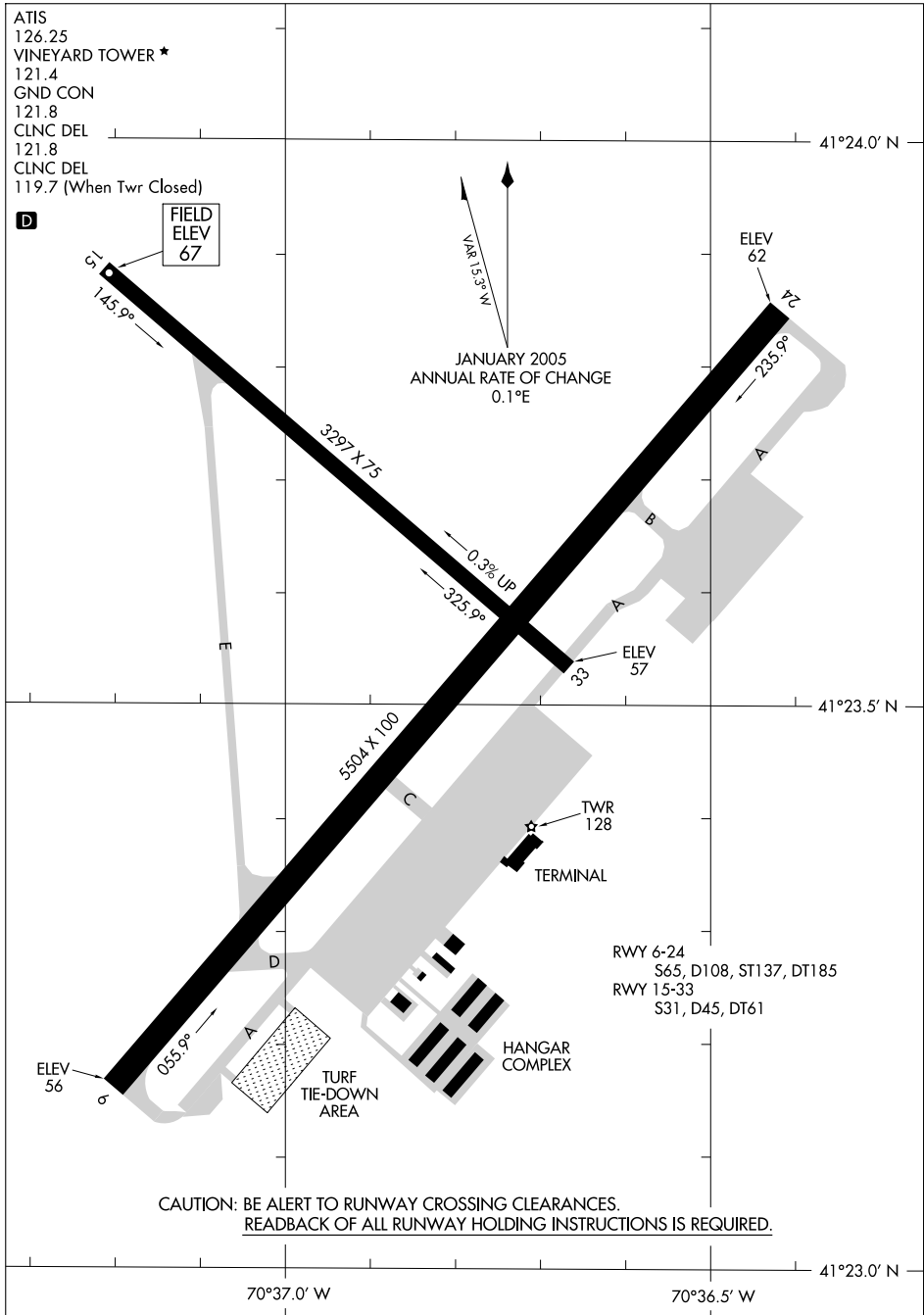


| CATEGORY | A                 | B | C                   | D                 |
|----------|-------------------|---|---------------------|-------------------|
| S-30     | 700-1 658 (700-1) |   | 700-1¾ 658 (700-1¾) | 700-2 658 (700-2) |
| CIRCLING | 700-1 658 (700-1) |   | 700-1¾ 658 (700-1¾) | 700-2 658 (700-2) |

|                         |    |    |     |     |     |
|-------------------------|----|----|-----|-----|-----|
| REIL Rwy 30             |    |    |     |     |     |
| MIRL Rwy 12-30 <b>L</b> |    |    |     |     |     |
|                         |    |    |     |     |     |
| Knots                   | 60 | 90 | 120 | 150 | 180 |
| Min:Sec                 |    |    |     |     |     |

# AIRPORT DIAGRAM

VINEYARD HAVEN / MARTHAS VINEYARD (MVY)  
VINEYARD HAVEN, MASSACHUSETTS



ILS or LOC RWY 24

VINEYARD HAVEN / MARTHAS VINEYARD (MVY)

**MISSED APPROACH:** Climb to 800 then climbing left turn to 2500 via MVY VOR/DME R-180 to CLAMY Int / ACK 23.9 DME and hold.

VINEYARD TOWER ★  
121.4 (CTAF)

MSA MVY 25 NM

2100

180°

1600

090°

IAF  
NANTUCKET  
116.2 ACK   
Chan 109

ELEV 67

236° 4.3 NM from FAF

TDZE 62

3297 x 75

0.3% up

92±

5500 x 100

33 68

TWI 128

76 75 80 66

87 77 93 80 51 92± 76 75 80 66

62 33 68 128 88

HIRL Rwy 6-24

MIRL Rwy 15-33

REIL Rwy 6 and 33

|                   |      |      |      |      |      |
|-------------------|------|------|------|------|------|
| FAF to MAP 4.3 NM |      |      |      |      |      |
| Knots             | 60   | 90   | 120  | 150  | 180  |
| Min:Sec           | 4:18 | 2:52 | 2:09 | 1:43 | 1:26 |



# RNAV (GPS) RWY 6

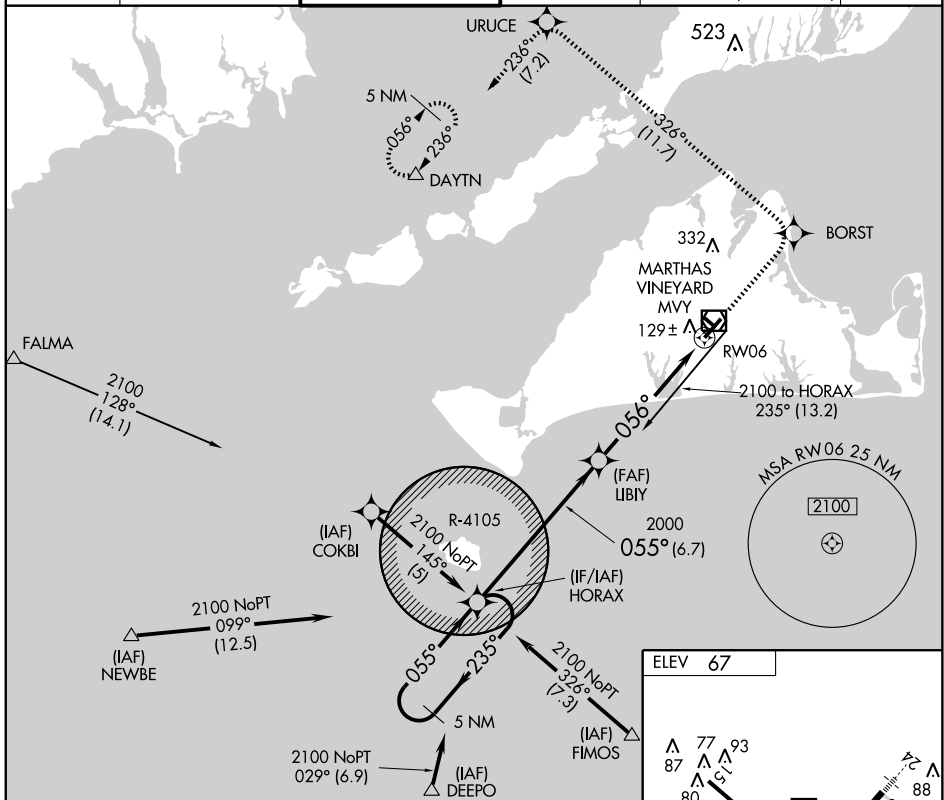
VINEYARD HAVEN / MARTHAS VINEYARD (MVY)

|  |                        |                             |                                       |
|--|------------------------|-----------------------------|---------------------------------------|
| WAAS<br>CH <b>42601</b><br><b>W06A</b> | APP CRS<br><b>056°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>5500</b><br><b>58</b><br><b>67</b> |
|--|------------------------|-----------------------------|---------------------------------------|

**⚠** If local altimeter setting not received, use Hyannis altimeter setting and increase all DAs/MDAs 60 feet. Baro-VNAV NA when using Hyannis altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 49°C (120°F). DME/DME RNP-03 NA. Visibility reduction by helicopters NA.

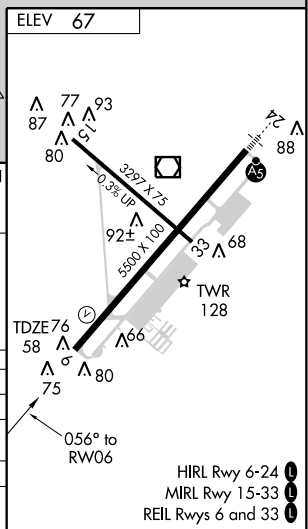
**MISSED APPROACH:**  
Climb to 2000 direct BORST and via 326° track to URUCE and via 236° track to DAYTN and hold.

|                       |                                |   |                         |   |                         |
|-----------------------|--------------------------------|---|-------------------------|---|-------------------------|
| ATIS<br><b>126.25</b> | CAPE APP CON ★<br><b>119.7</b> | VINEYARD TOWER ★<br><b>121.4</b> (CTAF) | GND CON<br><b>121.8</b> | CUNC DEL<br><b>121.8</b> <b>119.7</b><br>(Tower closed) | UNICOM<br><b>122.95</b> |
|-----------------------|--------------------------------|---|-------------------------|---|-------------------------|



| 5 NM Holding Pattern  | 2000   | BORST  | 326° track | URUCE | 236° track | DAYTN |
|-----------------------|--------|--------|------------|-------|------------|-------|
| 2100 ← 235°<br>055° → |        |        |            |       |            |       |
| GS 3.00°<br>TCH 59    |        |        |            |       |            |       |
|                       | 2000   |        |            |       |            |       |
|                       | 6.7 NM | 5.8 NM |            |       |            |       |

| CATEGORY     | A                    | B                    | C                      | D                    |
|--------------|----------------------|----------------------|------------------------|----------------------|
| LPV DA       | 323-1                | 265 (300-1)          |                        |                      |
| LNAV/VNAV DA | 399-1¼               | 341 (400-1¼)         |                        |                      |
| LNAV MDA     | 380-1                | 322 (400-1)          |                        |                      |
| CIRCLING     | 460-1<br>393 (400-1) | 520-1<br>453 (500-1) | 520-1½<br>453 (500-1½) | 620-2<br>553 (600-2) |



RNAV (GPS) RWY 24

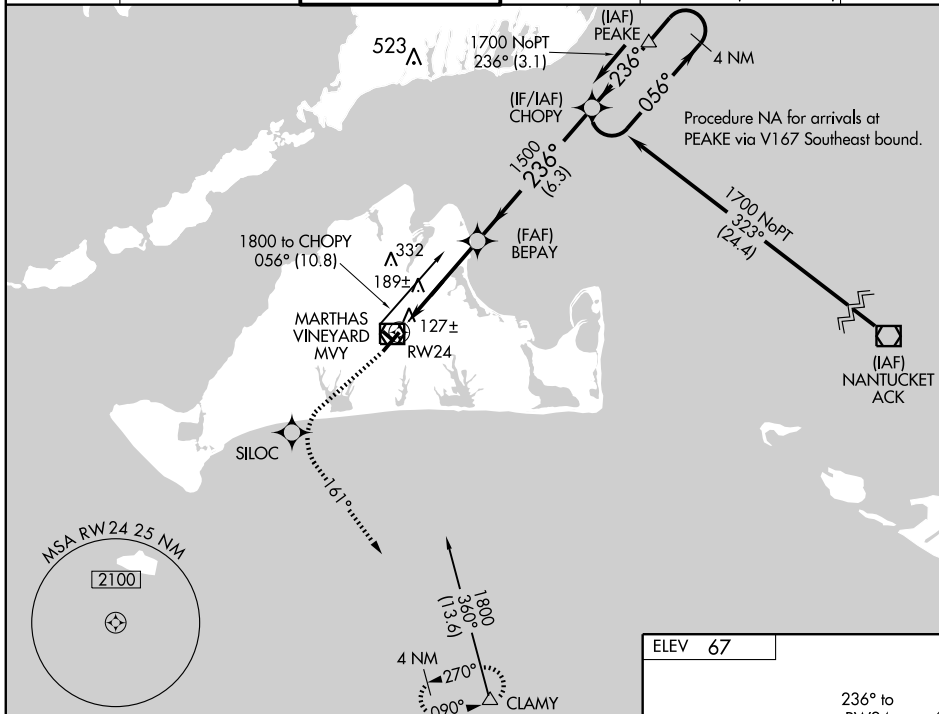
VINEYARD HAVEN / MARTHAS VINEYARD (MVY)

MALSR



**MISSED APPROACH:** Climb to 2500 direct SILOC and left turn via 161° track to CLAMY and hold.

|              |                |
|--------------|----------------|
| CLNC DEL     |                |
| <b>121.8</b> | <b>119.7</b>   |
|              | (Tower closed) |

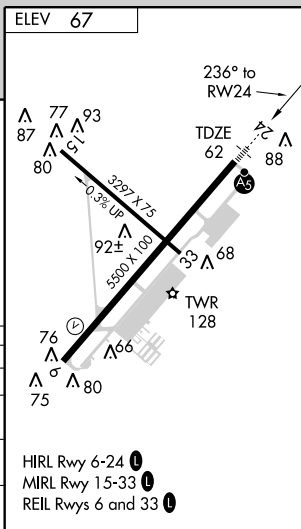
UNICOM  
122.95

NE-1. 22 OCT 2009 to 19 NOV 2009

Diagram illustrating the 4 NM Holding Pattern for RW24. The pattern is defined by a 4 NM radius. Key parameters and distances shown include:

- Altitude: 2500
- Navigation Aids: SILOC, CLAMY (triangle symbol)
- Track Angle: 161° track
- Distance to RW24: 1 NM
- Altitude at start of pattern: 1500
- Pattern Angle: 236°
- Outbound Angle: 056°
- Altitude on outbound leg: 1700
- Distance to next fix: 6.3 NM
- Pattern Radius: 4 NM Holding Pattern
- GS 3.00°
- TCH 51

| CATEGORY      |     | A                    | B                    | C                      | D                     |
|---------------|-----|----------------------|----------------------|------------------------|-----------------------|
| LPV           | DA  | 341/24 279 (300-½)   |                      |                        |                       |
| LNAV/<br>VNAV | DA  | 392/40 330 (400-¾)   |                      |                        |                       |
| LNAV          | MDA | 440/24 378 (400-½)   |                      |                        | 440/50<br>378 (400-1) |
| CIRCLING      |     | 460-1<br>393 (400-1) | 520-1<br>453 (500-1) | 520-1½<br>453 (500-1½) | 620-2<br>553 (600-2)  |

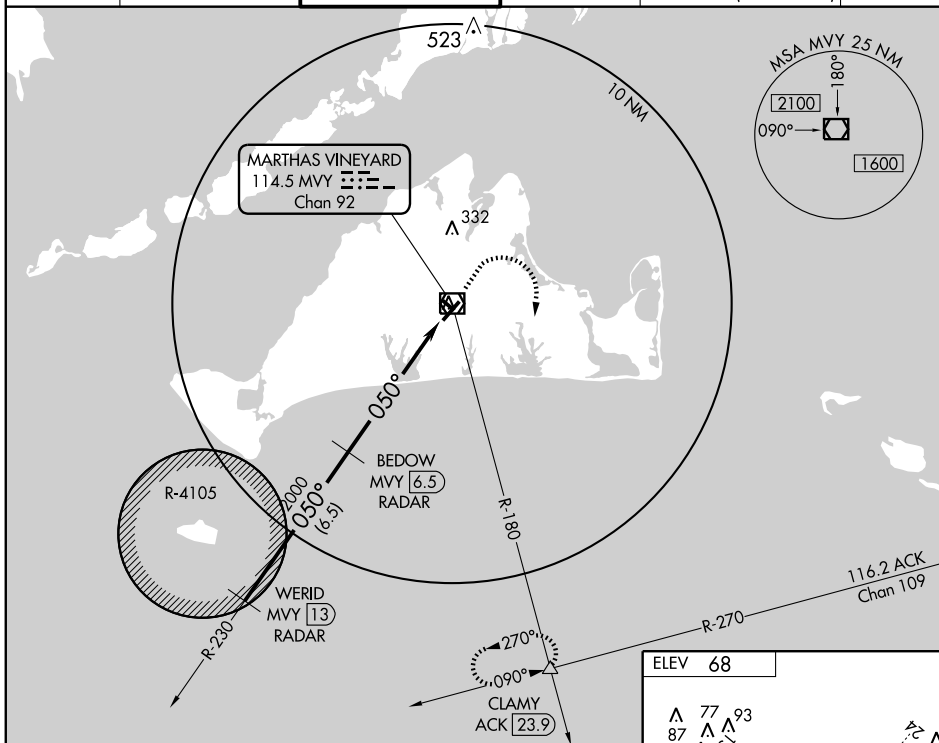


VOR RWY 6  
VINEYARD HAVEN / MARTHAS VINEYARD (MVY)

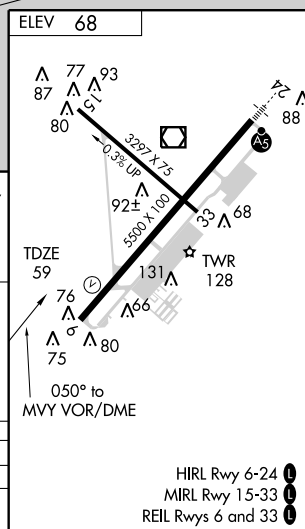
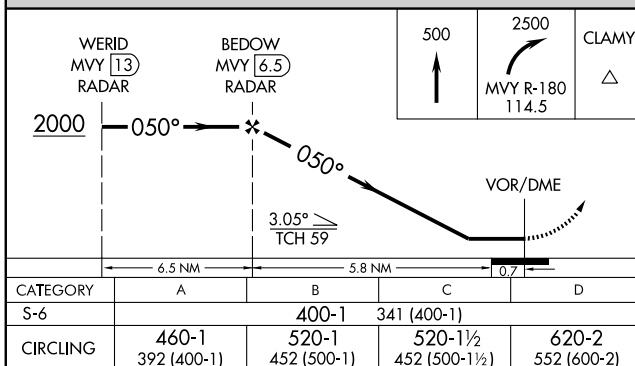
**T** Radar or DME Required.  
**A** If local altimeter setting not received, use Hyannis altimeter setting and increase all MDAs 60 feet.

**MISSED APPROACH:** Climb to 500 then climbing right turn to 2500 via MVY VOR/DME R-180 to CLAMY Int and hold.

|        |                |                  |         |                               |        |
|--------|----------------|------------------|---------|-------------------------------|--------|
| ATIS   | CAPE APP CON ★ | VINEYARD TOWER ★ | GND CON | CLNC DEL                      | UNICOM |
| 126.25 | 119.7          | 121.4 0 (CTAF)   | 121.8   | 121.8 119.7<br>(Tower closed) | 122.95 |



## RADAR REQUIRED



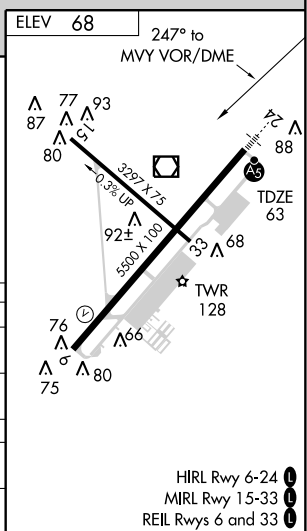
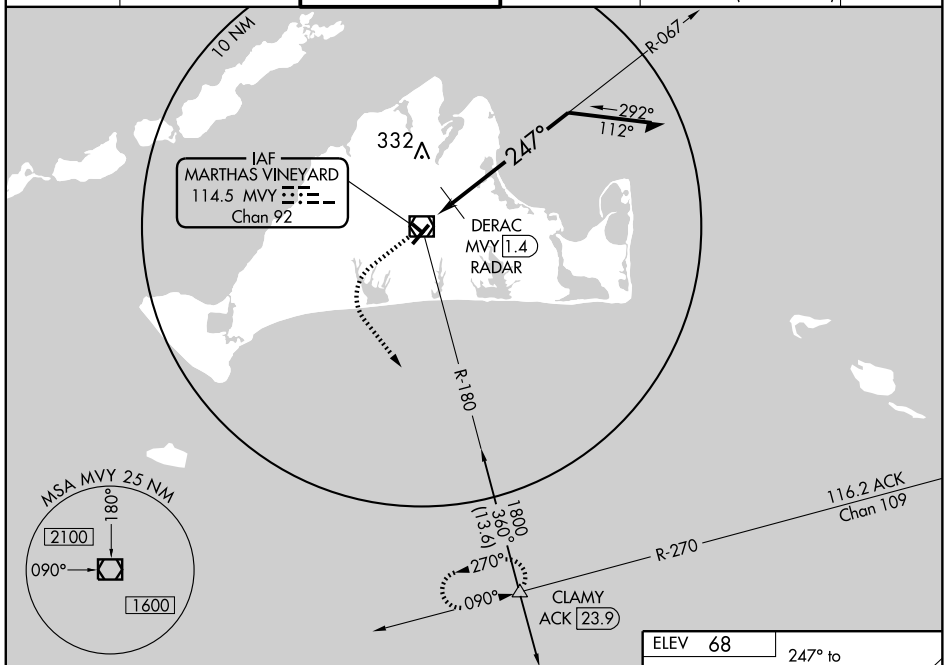
|   |                        |  |
|---|------------------------|--|
| VOR/DME MVY<br><b>114.5</b><br>Chan <b>92</b> | APP CRS<br><b>247°</b> | Rwy Idg<br>TDZE<br>Apt Elev<br><b>5500</b><br><b>63</b><br><b>68</b> |
|---|------------------------|--|

# VOR RWY 24

VINEYARD HAVEN / MARTHAS VINEYARD (MVY)

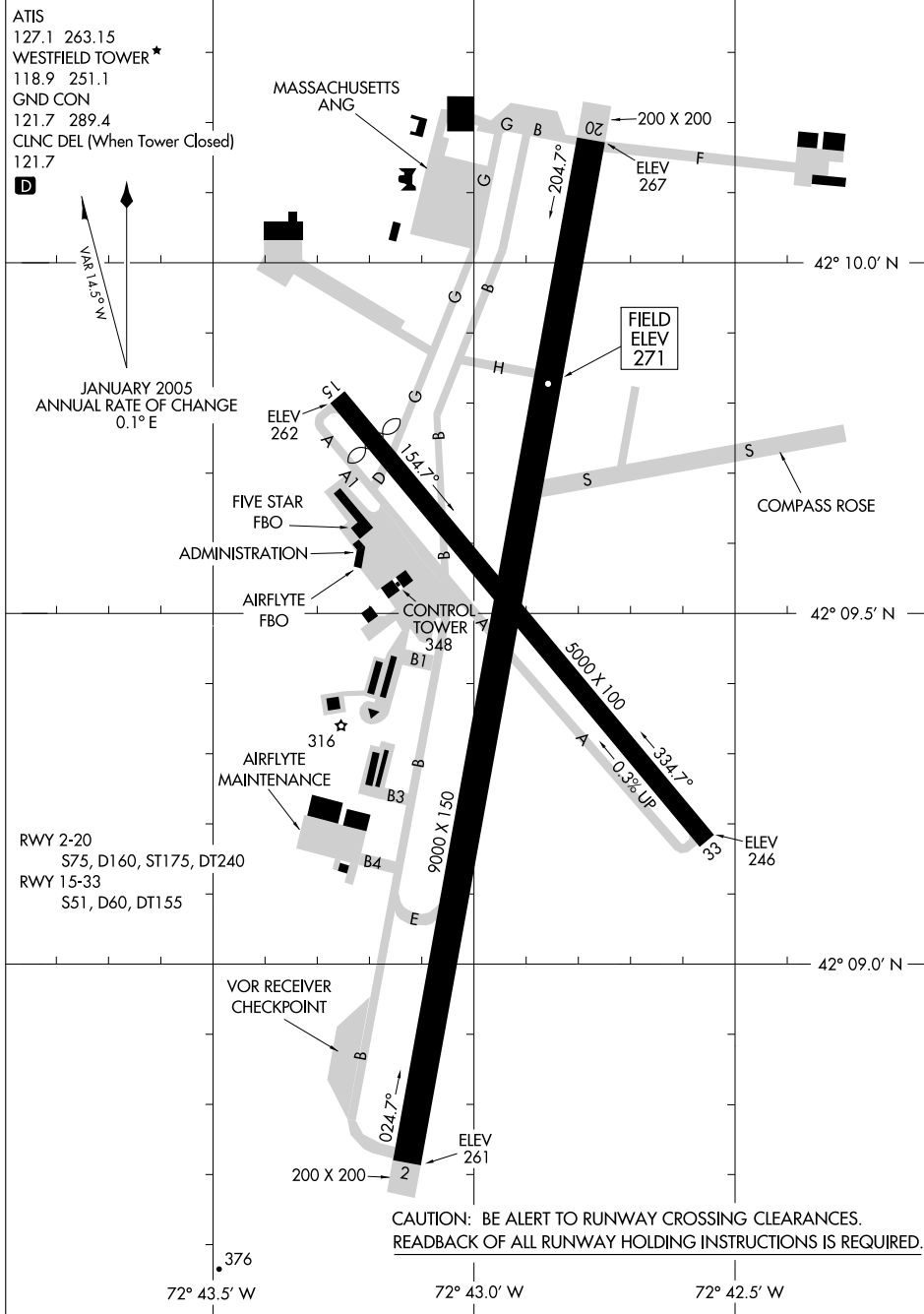
|  |                            |   |
|--|----------------------------|---|
| <p><b>▼</b> If local altimeter setting not received, use Hyannis altimeter setting and increase all MDAs 60 feet.</p> <p><b>▲</b> For inoperative MALSR, increase DERAC fix minimums Cat D visibility to RVR 6000.</p> | <p>MALSR<br/><b>A5</b></p> | <p>MISSED APPROACH: Climb to 600 then climbing left turn to 2500 via MVY VOR/DME R-180 to CLAMY Int and hold.</p> |
|--|----------------------------|---|

|                       |                                |   |                         |   |                         |
|-----------------------|--------------------------------|---|-------------------------|---|-------------------------|
| ATIS<br><b>126.25</b> | CAPE APP CON ★<br><b>119.7</b> | VINEYARD TOWER ★<br><b>121.4 0</b> (CTAF) | GND CON<br><b>121.8</b> | CLNC DEL<br><b>121.8</b> <b>119.7</b><br>(Tower closed) | UNICOM<br><b>122.95</b> |
|-----------------------|--------------------------------|---|-------------------------|---|-------------------------|



# AIRPORT DIAGRAM

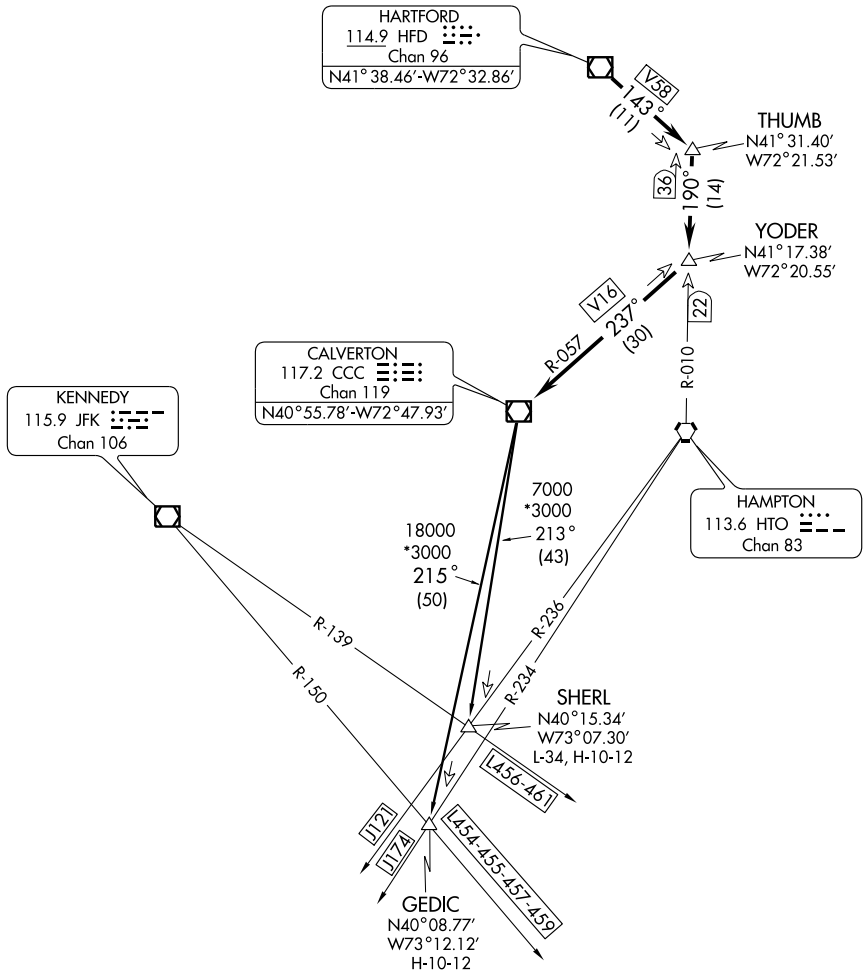
AL-446 (FAA)

WESTFIELD/BARNES MUNI (BAF)  
WESTFIELD/SPRINGFIELD, MASSACHUSETTS

NE-1, 22 OCT 2009 to 19 NOV 2009

## COASTAL TWO DEPARTURE (HI)

ATIS 127.1 263.15  
CLNC DEL ★  
121.7  
GND CON  
121.7 289.4  
WESTFIELD TOWER ★  
118.9 251.1  
BRADLEY DEP CON  
125.35 281.5  
ASOS



NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

## COASTAL TWO DEPARTURE (HI)



## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Fly assigned heading and altitude for radar vectors to HFD VOR/DME. Thence. . . .

. . . . From over HFD VOR/DME proceed via the HFD R-143 to THUMB INT, then proceed via the HTO R-010 to YODER INT, then via the CCC R-057 to CCC VOR/DME. Then via (transition) or (assigned route). Expect clearance to requested flight level ten (10) minutes after departure.

GEDIC TRANSITION (CSTL2.GEDIC): From over CCC VOR/DME via CCC R-215 to GEDIC INT.

SHERL TRANSITION (CSTL2.SHERL): From over CCC VOR/DME via CCC R-213 to SHERL INT.

## DEER PARK TWO ARRIVAL

WINDSOR LOCKS, CONNECTICUT

BRADLEY APP CON  
123.95 348.3  
ATIS  
118.15

BARNES  
MUNI

WESTOVER ARB/  
METROPOLITAN

BRADLEY  
INTL

LOCALIZER 111.1  
I-BDL  
Chan 48  
N41°57.30'-W72°39.99'

BRISS  
N41°42.08'  
W73°00.94'

MADISON  
110.4 MAD  
Chan 41  
N41°18.83'-W72°41.53'

Expect to cross  
at 11,000'.

CARMEL  
116.6 CMK  
Chan 113

11000  
053°  
(42)

DEER PARK  
117.7 DPK  
Chan 124  
N40°47.51'-W73°18.22'  
L-33-34, H-10-12

NOTE: Chart not to scale.

From over DPK VORTAC via DPK R-053 and MAD R-235 to MAD VOR/DME, thence from MAD VOR/DME via MAD R-341 to BRISS INT. Expect radar vectors to final approach course prior to BRISS INT when landing other than Bradley Runway 6.



## GPS RWY 2

WESTFIELD/BARNES MUNI (BAF)

|         |          |      |
|---------|----------|------|
| APP CRS | Rwy Idg  | 9000 |
| 026°    | TDZE     | 265  |
|         | Apt Elev | 271  |



**A NA**

**MISSED APPROACH:** Climb to 3000 direct KLYDE WP and hold.

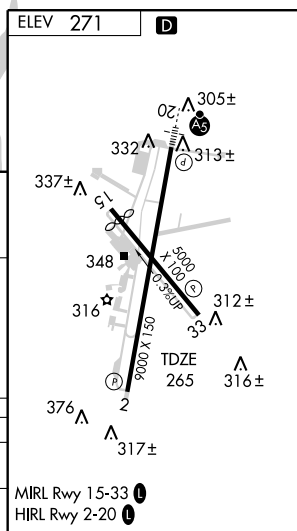
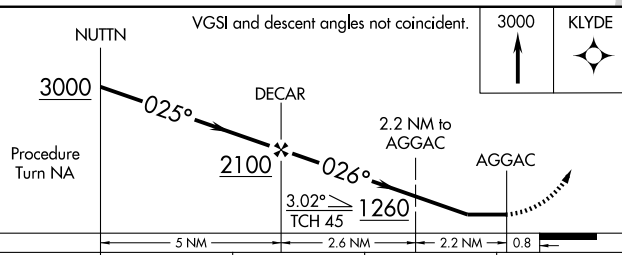
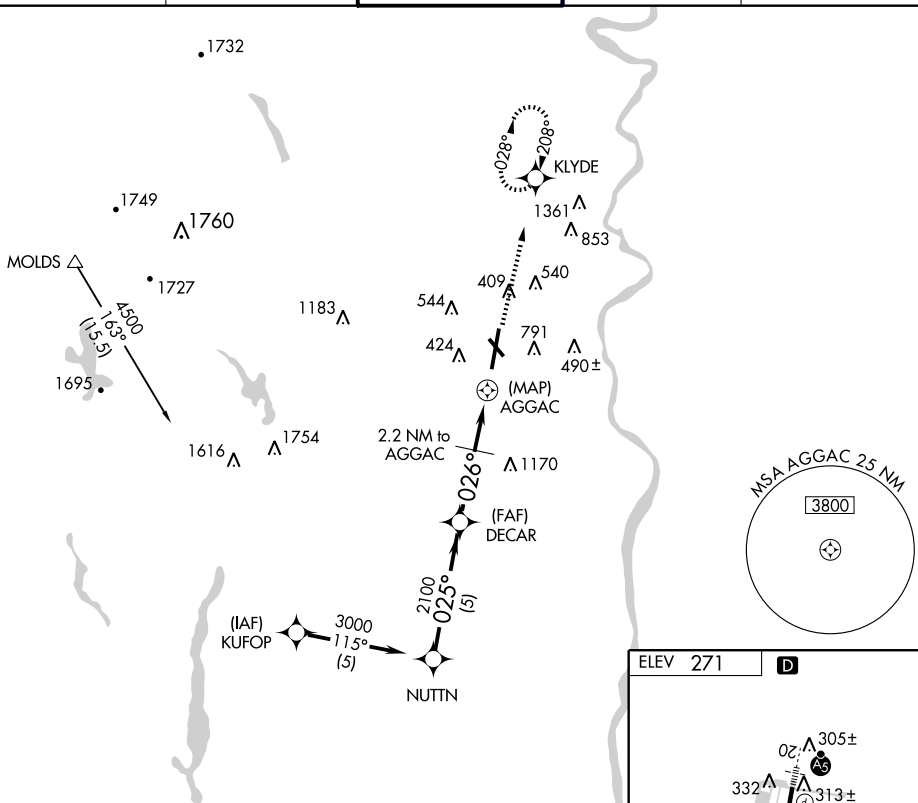
ATIS  
127.1 263.15



BRADLEY APP CON  
125.35 281.5

WESTFIELD TOWER★  
118.9 (CTAF) **L** 251.1

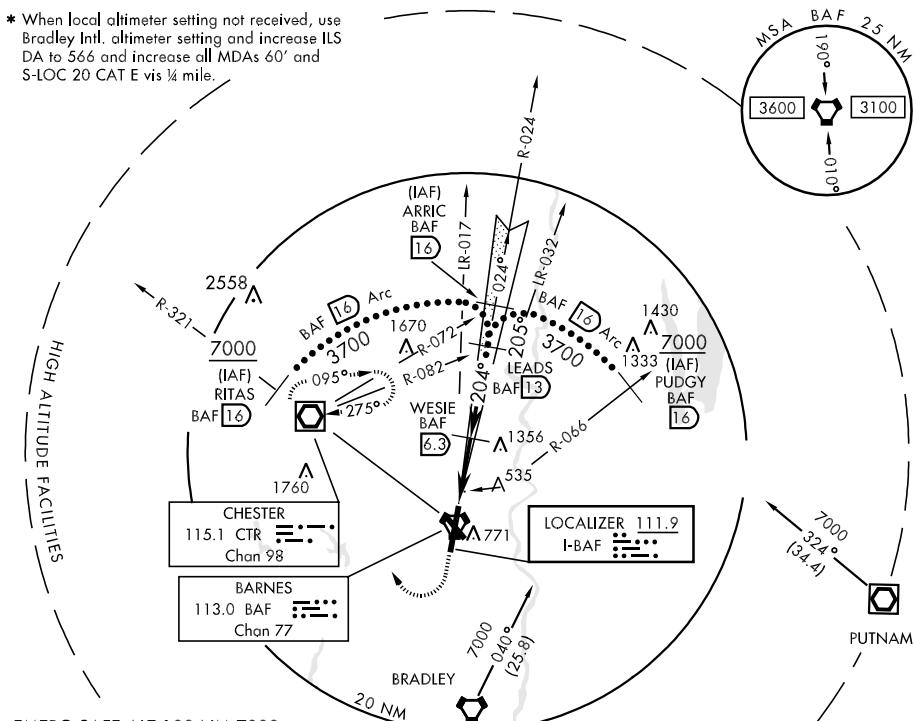
GND CON  
121.7 289.4

CLNC DEL ★  
**121.7**



|  |  |   |                               |                             |
|--|--|---|-------------------------------|-----------------------------|
| LOC I-BAF<br><b>111.9</b>  | APCH CRS<br><b>204°</b>  | Rwy Idg<br>TDZE<br>Arpt Elev<br><b>9000</b><br><b>271</b><br><b>271</b>   | JAL-446 [USAF]                | WESTFIELD/BARNES MUNI (BAF) |
|  |  | <b>MISSED APPROACH:</b> Climb to 1300, then climbing right turn to 4000 direct CTR VOR/DME and hold.<br>(TACAN acct climb to 1300, then climbing right turn to 4000 via hdg 010° and BAF VORTAC R-321 to RITAS and hold.) |                               |                             |
| ATIS<br><b>263.15</b>  | BRADLEY APP CON<br><b>125.35 281.5</b>   | WESTFIELD TOWER ★<br><b>118.9 (CTAF) 0 251.1</b>  | GND CON<br><b>121.7 289.4</b> |                             |

\* When local altimeter setting not received, use Bradley Intl. altimeter setting and increase ILS DA to 566 and increase all MDAs 60' and S-LOC 20 CAT E vis ¼ mile.



EMERG SAFE ALT 100 NM 7000

1300

4000

CTR

↑

↷

ILS unusable from 0.6 NM to THLD

WESIE

2200

13

205°

3700

2600

2200

GS 3.00° TCH 50°

ARRIC R-024

16

LEADS Intcp LOC

204°

204°

0.6

5.2 NM

VORTAC

0.5

1.1

1300

4000

CTR

ILS unusable from 0.6 NM to THLD

WESIE

2200

13

205°

3700

2600

2200

GS 3.00° TCH 50°

ARRIC R-024

16

LEADS Intcp LOC

204°

204°

0.6

5.2 NM

VORTAC

0.5

1.1

| CATEGORY   | C                       | D                     | E                       |
|------------|-------------------------|-----------------------|-------------------------|
| S-ILS 20 * | 521/40                  | 250 (300-¾)           |                         |
| S-LOC 20 * | 800/50<br>529 (600-1)   | 800/60 529 (600-1¼)   |                         |
| CIRCLING   | 1160-2¾<br>889 (900-2¾) | 1160-3<br>889 (900-3) | 1500-3<br>1229 (1300-3) |

ELEV 271

204° 5.8 NM from FAF

305

332

337

348

376

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Rwy 33

ldg 4775'

MIRL Rwy

15-33

HIRL Rwy

2-20

FAF to MAP 5.2 NM

Knots

120

140

160

180

200

Min:Sec

2:36

2:14

1:57

1:44

1:34

|  |                         |  |
|--|-------------------------|--|
| VORTAC BAF<br><b>113.0</b><br>Chan <b>77</b> | APCH CRS<br><b>208°</b> | Rwy Idg <b>9000</b><br>TDZE <b>271</b><br>Arpt Elev <b>271</b> |
|--|-------------------------|--|

JAL-446 [USAF]

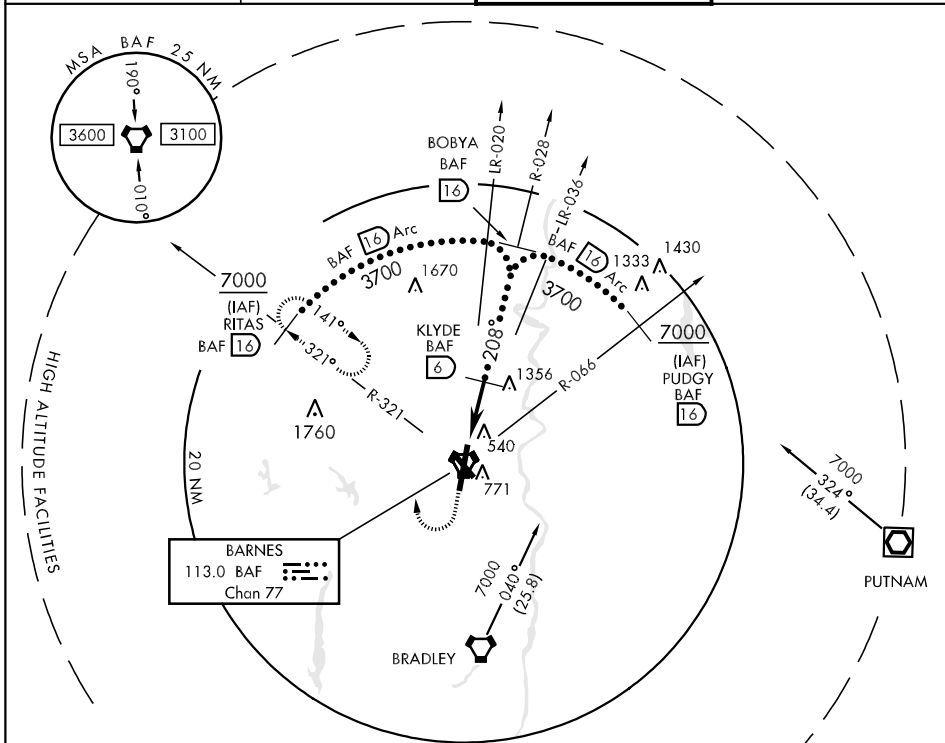
WESTFIELD/BARNES MUNI (BAF)

\* When local altimeter setting not received, use Bradley  
 Infl. altimeter setting and increase all MDAs 60' and  
 S-20 CAT E vis ¼ mile.



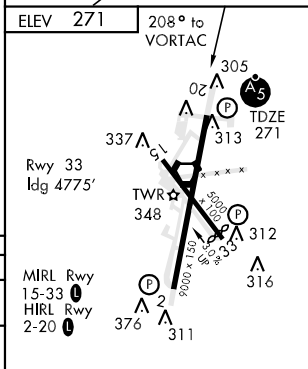
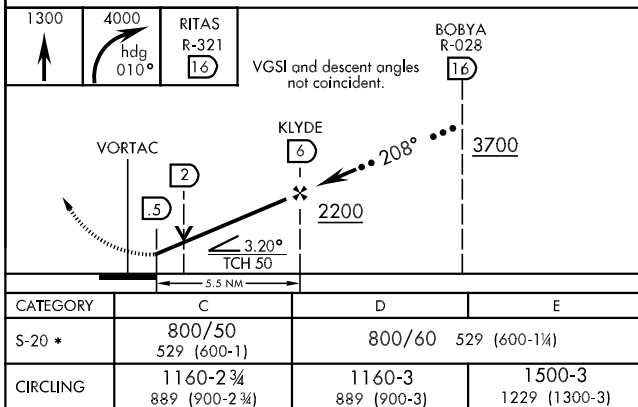
MISSED APPROACH: Climb to 1300, then climbing right  
 turn to 4000 via hdg 010° and BAF VORTAC R-321 to  
 RITAS and hold.

|                       |  |  |                               |
|-----------------------|--|--|-------------------------------|
| ATIS<br><b>263.15</b> | BRADLEY APP CON<br><b>125.35 281.5</b> | WESTFIELD TOWER ★<br><b>118.9 (CTAF) 251.1</b> | GND CON<br><b>121.7 289.4</b> |
|-----------------------|--|--|-------------------------------|



NE-1, 22 OCT 2009 to 19 NOV 2009

EMERG SAFE ALT 100 NM 7000



|                                  |                        |   |
|----------------------------------|------------------------|---|
| LOC I-BAF<br><b><u>111.9</u></b> | APP CRS<br><b>204°</b> | Rwy Idg <b>8919</b><br>TDZE <b>271</b><br>Apt Elev <b>271</b> |
|----------------------------------|------------------------|---|

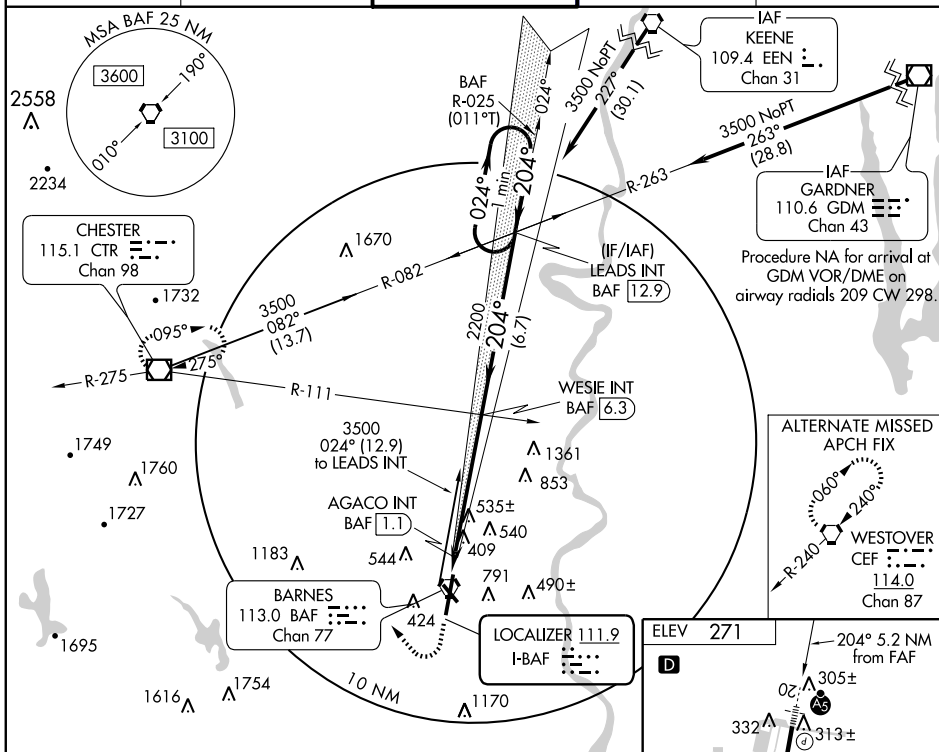
ILS or LOC RWY 20  
WESTFIELD / BARNES MUNI (BAF)

- ▼** If local altimeter setting not received, use Bradley Intl altimeter setting and increase ILS DA to 566 and increase all MDAs 60 feet.
- ▲** For inoperative MALSR, increase S-LOC 20 Cats A and B visibility to RVR 5000. Inoperative table does not apply to S-ILS 20. Visibility reduction by helicopters NA.

MALSR  
 

**MISSED APPROACH:** Climb to 1300 then climbing right turn to 4000 direct CTR VOR/DME and hold, continue climb-in-hold to 4000.

|                      |                                 |  |                        |                     |
|----------------------|---------------------------------|--|------------------------|---------------------|
| ATIS<br>127.1 263.15 | BRADLEY APP CON<br>125.35 281.5 | WESTFIELD TOWER★<br>118.9 (CTAF) 0 251.1 | GND CON<br>121.7 289.4 | CLNC DEL ★<br>121.7 |
|----------------------|---------------------------------|--|------------------------|---------------------|



1300  
↑

4000  
↗

CTR  
□  
115.1

WESIE INT  
BAF 6.3

LEADS INT  
BAF 12.9

One Minute  
Holding Pattern

AGACO  
BAF 1.1

024° → 3500  
← 204°

2200

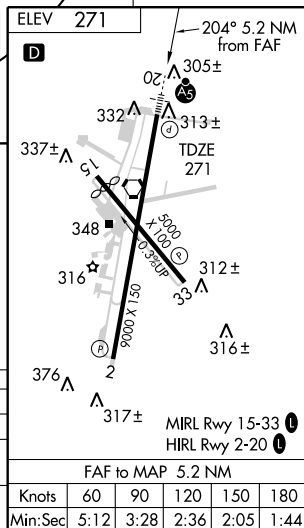
204°

GS 3.00°  
TCH 50

VGS and ILS glidepath not coincident.

0.6 NM 5.2 NM 6.7 NM

| CATEGORY | A                          | B                          | C                      | D |
|----------|----------------------------|----------------------------|------------------------|---|
| S-ILS 20 | 521/40 250 (300-34)        |                            |                        |   |
| S-LOC 20 | 800/40 529 (600-34)        | 800/50 529 (600-1)         | 800/60 529 (600-1 1/4) |   |
| CIRCLING | 1160-1 1/4 889 (900-1 1/4) | 1160-2 3/4 889 (900-2 3/4) | 1160-3 889 (900-3)     |   |



|  |                        |                             |   |
|--|------------------------|-----------------------------|---|
| WAAS<br>CH <b>86405</b><br><b>W20A</b> | APP CRS<br><b>204°</b> | Rwy Idg<br>TDZE<br>Apt Elev | <b>8919</b><br><b>271</b><br><b>271</b> |
|--|------------------------|-----------------------------|---|

## RNAV (GPS) RWY 20

WESTFIELD/BARNES MUNI (BAF)

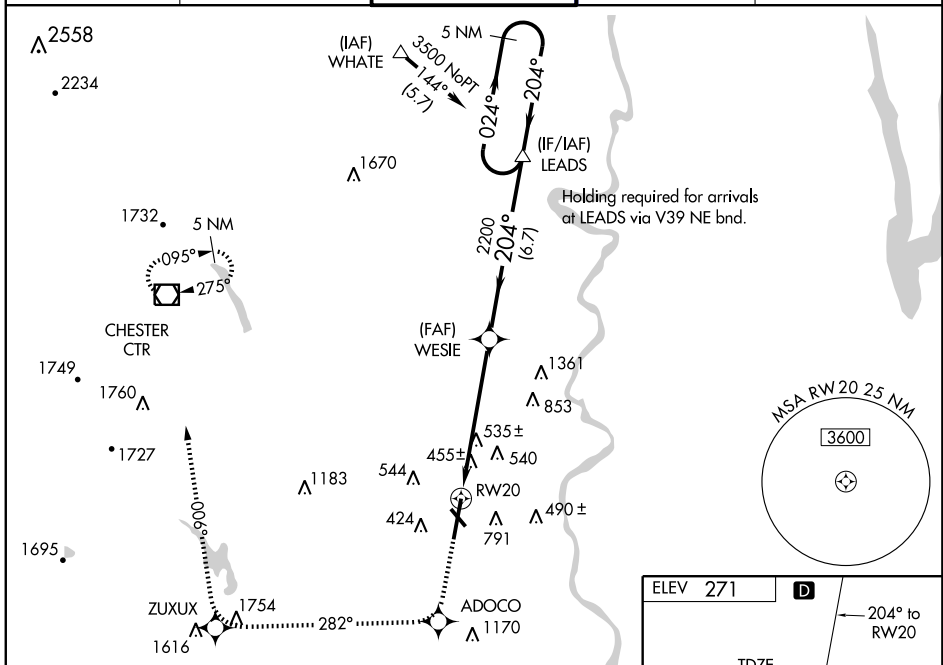
**▼** If local altimeter setting not received, use Bradley Inlt altimeter setting and increase LPV DA to 665, LNAV/VNAV DA to 973, and all MDAs 60 feet. VDP NA when using Bradley Inlt altimeter setting. Baro-VNAV NA when using Bradley Inlt altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 15°C (5°F) or above 48°C (118°F). For inoperative MALSR, increase LPV visibility to RVR 6000 all Cats, increase LNAV Cats A and B visibility to RVR 5000. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.




MALSR



**MISSED APPROACH:**  
Climb to 4000 direct  
ADOCO and via 282° track  
to ZUXUX and via 006° track  
to CTR VOR/DME and hold.

|                      |                                 |  |                        |                    |
|----------------------|---------------------------------|--|------------------------|--------------------|
| ATIS<br>127.1 263.15 | BRADLEY APP CON<br>125.35 281.5 | WESTFIELD TOWER★<br>118.9 (CTAF) 0 251.1 | GND CON<br>121.7 289.4 | CLNC DEL★<br>121.7 |
|----------------------|---------------------------------|--|------------------------|--------------------|



|           |   |             |  |             |  |   |
|-----------|---|-------------|--|-------------|--|---|
| 4000<br>↑ | ADOCO<br> | 282°<br>TRK | ZUXUX<br> | 006°<br>TRK | CTR<br> | VGSI and RNAV glidepath not coincident.<br>LEADS<br>5 NM<br>Holding Pattern |
|-----------|---|-------------|--|-------------|--|---|

\* LNAV only

\* 2 NM to RW20

WESIE

024° → 3500

← 204°

204°

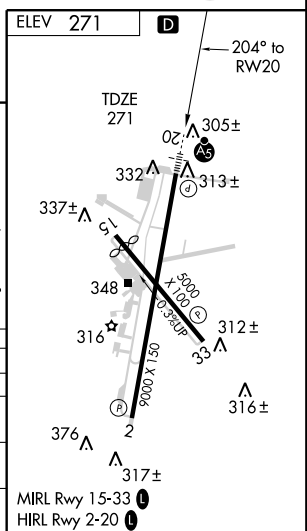
2200

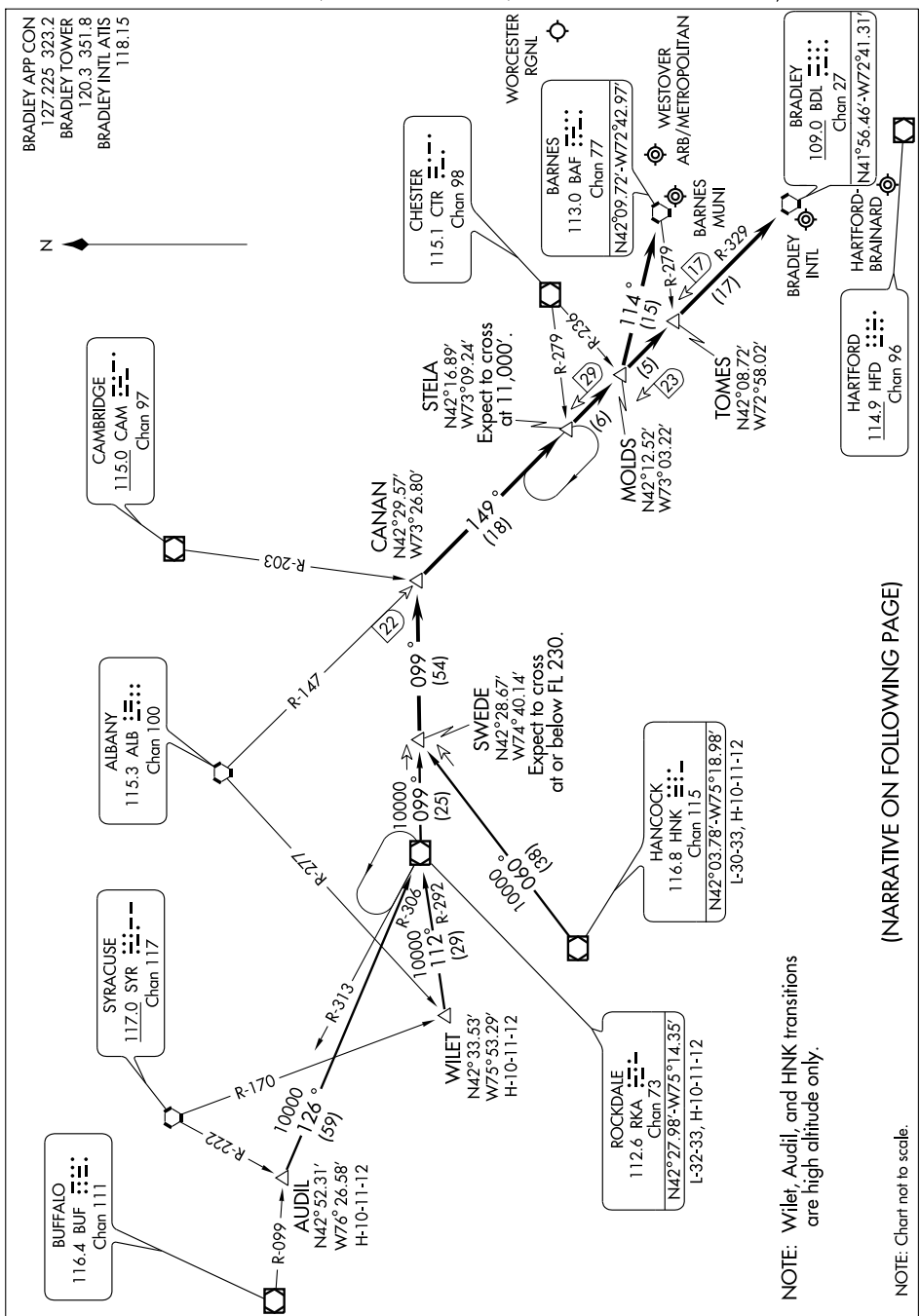
GS 3.00°

TCH 50

2 NM 3.8 NM 6.7 NM

| CATEGORY   | A                          | B | C                             | D                            |
|------------|----------------------------|---|-------------------------------|------------------------------|
| LPV DA     | 620/40 349 (400-3/4)       |   |                               |                              |
| LNAV/ VNAV | 928-1 3/4 657 (700-1 3/4)  |   |                               |                              |
| LNAV MDA   | 940/40 669 (700-3/4)       |   | 940/60<br>669 (700-1 1/4)     | 940-1 1/2<br>669 (700-1 1/2) |
| CIRCLING   | 1160-1 1/4 889 (900-1 1/4) |   | 1160-2 3/4<br>889 (900-2 3/4) | 1160-3<br>889 (900-3)        |





(NARRATIVE ON FOLLOWING PAGE)

## ARRIVAL DESCRIPTION

AUDIL TRANSITION (AUDIL.SWEDE1): From over AUDIL INT via RKA R-306 to RKA VOR/DME; then via RKA R-099 to SWEDE INT. Thence. . . .

HANCOCK TRANSITION (HNK.SWEDE1): From over HNK VOR/DME via HNK R-060 to SWEDE INT. Thence. . . .

ROCKDALE TRANSITION (RKA.SWEDE1): From over RKA VOR/DME via RKA R-099 to SWEDE INT. Thence. . . .

WILET TRANSITION (WILET.SWEDE1): From over WILET INT via RKA R-292 to RKA VOR/DME; then via RKA R-099 TO SWEDE INT. Thence. . . .

ARRIVALS FOR BRADLEY INTL and HARTFORD-BRAINARD

. . . . From over SWEDE INT via RKA R-099 to CANAN INT. Then via BDL R-329 to BDL VORTAC. Expect radar vectors to final approach course.

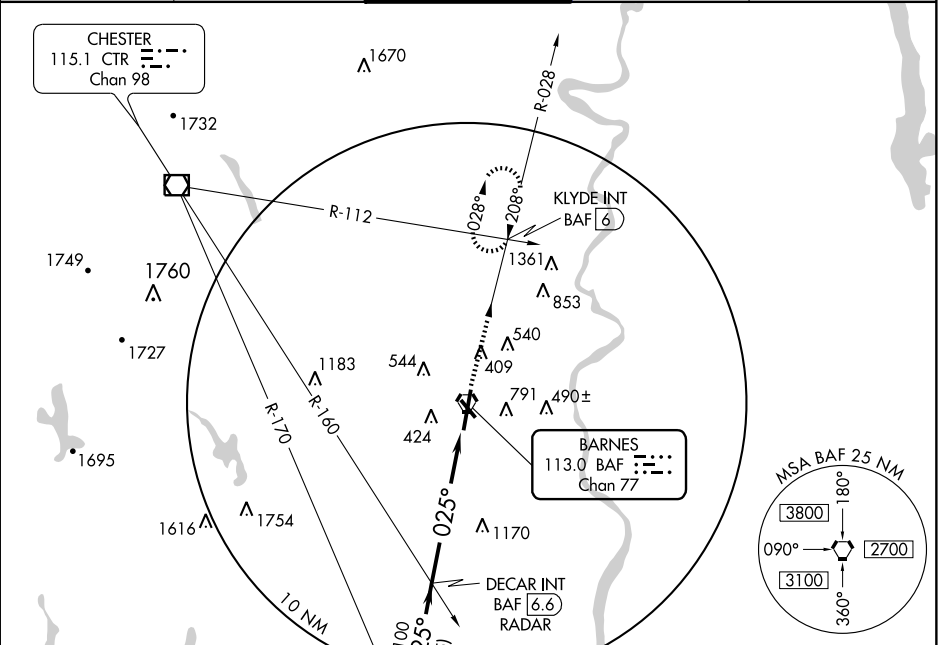
ARRIVALS FOR BARNES MUNI, WESTOVER ARB/METROPOLITAN and WORCESTER  
RGNL

. . . . From over SWEDE INT via RKA R-099 to CANAN INT. Then via BDL R-329 to MOLDS INT. Then direct to BAF VORTAC. Expect radar vectors to final approach course.

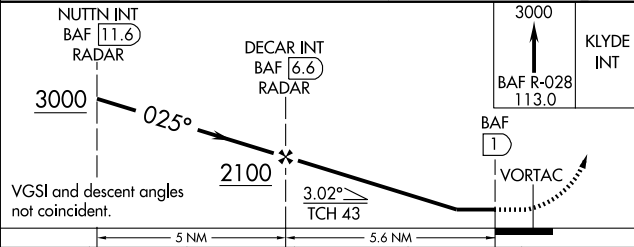
|            |         |          |      |
|------------|---------|----------|------|
| BAF VORTAC | APP CRS | Rwy Idg  | 9000 |
| 113.0      | 025°    | TDZE     | 265  |
| Chan 77    |         | Apt Elev | 271  |

VOR or TACAN RWY 2  
WESTFIELD/BARNES MUNI (BAF)

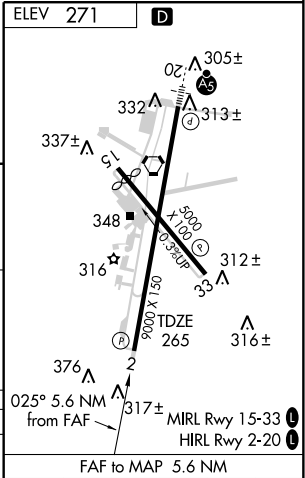
|                           |  |                      |             |
|---------------------------|--|----------------------|-------------|
| <div>▼</div> <div>▲</div> | MISSED APPROACH: Climb to 3000 via the BAF VORTAC R-028 to KLYDE Int and hold. |                      |             |
| ATIS                      | BRADLEY APP CON  | WESTFIELD TOWER★     | GND CON     |
| 127.1 263.15              | 125.35 281.5   | 118.9 (CTAF) 0 251.1 | 121.7 289.4 |
|                           |  |                      | CLNC DEL ★  |
|                           |  |                      | 121.7       |



RADAR REQUIRED



| CATEGORY | A       | B            | C                       | D                      | E                      |
|----------|---------|--------------|-------------------------|------------------------|------------------------|
| S-2      | 780-1   | 515 (600-1)  | 780-1½<br>515 (600-1½)  | 780-1¾<br>515 (600-1¾) | 780-1¾<br>515 (600-1¾) |
| CIRCLING | 1160-1¼ | 889 (900-1¼) | 1160-2¾<br>889 (900-2¾) | 1160-3                 | 889 (900-3)            |






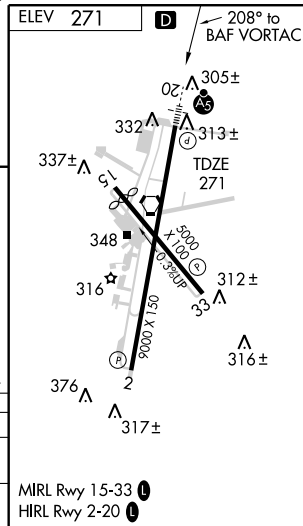
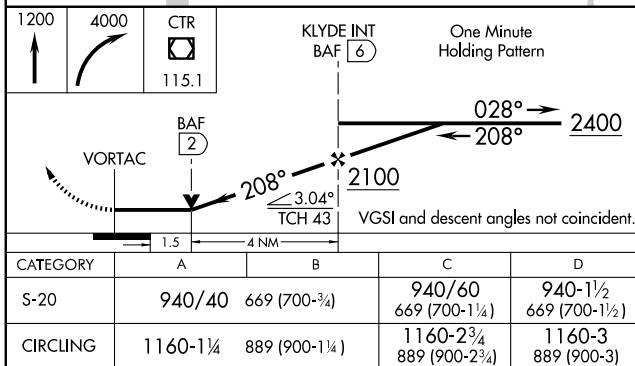
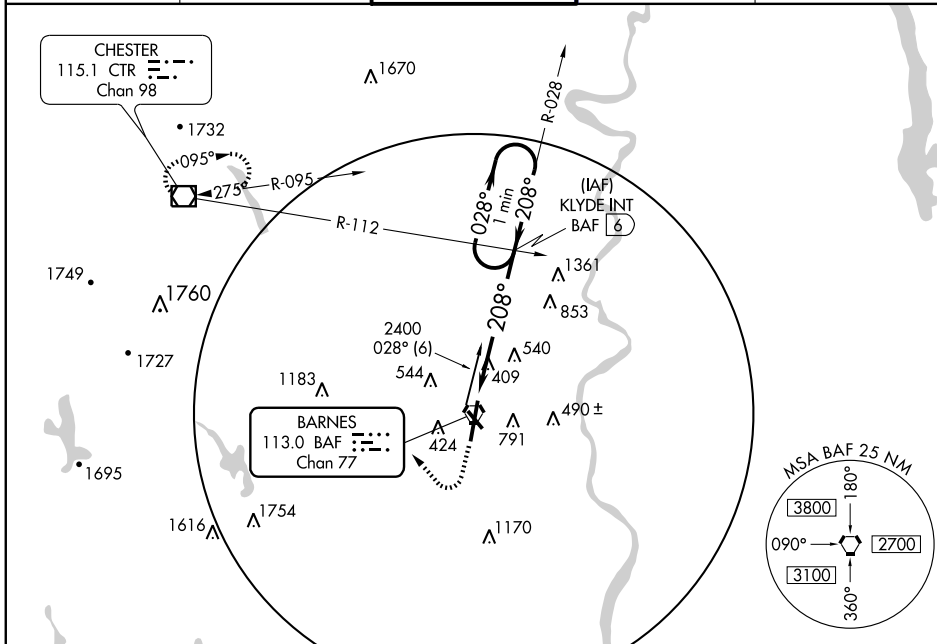
|                                       |                        |   |
|---------------------------------------|------------------------|---|
| BAF VORTAC<br><b>113.0</b><br>Chan 77 | APP CRS<br><b>208°</b> | Rwy Idg <b>8919</b><br>TDZE <b>271</b><br>Apt Elev <b>271</b> |
|---------------------------------------|------------------------|---|

# VOR RWY 20

WESTFIELD/ BARNES MUNI (BAF)

|   |   |   |
|---|---|---|
| <b>V</b> Visibility reduction by helicopters NA.<br><b>A</b> For inoperative MALS, increase Cat A/B visibility to RVR 5000. | MALS<br> | MISSED APPROACH: Climb to 1200, then climbing right turn to 4000 direct CTR VOR/DME and hold. |
|---|---|---|

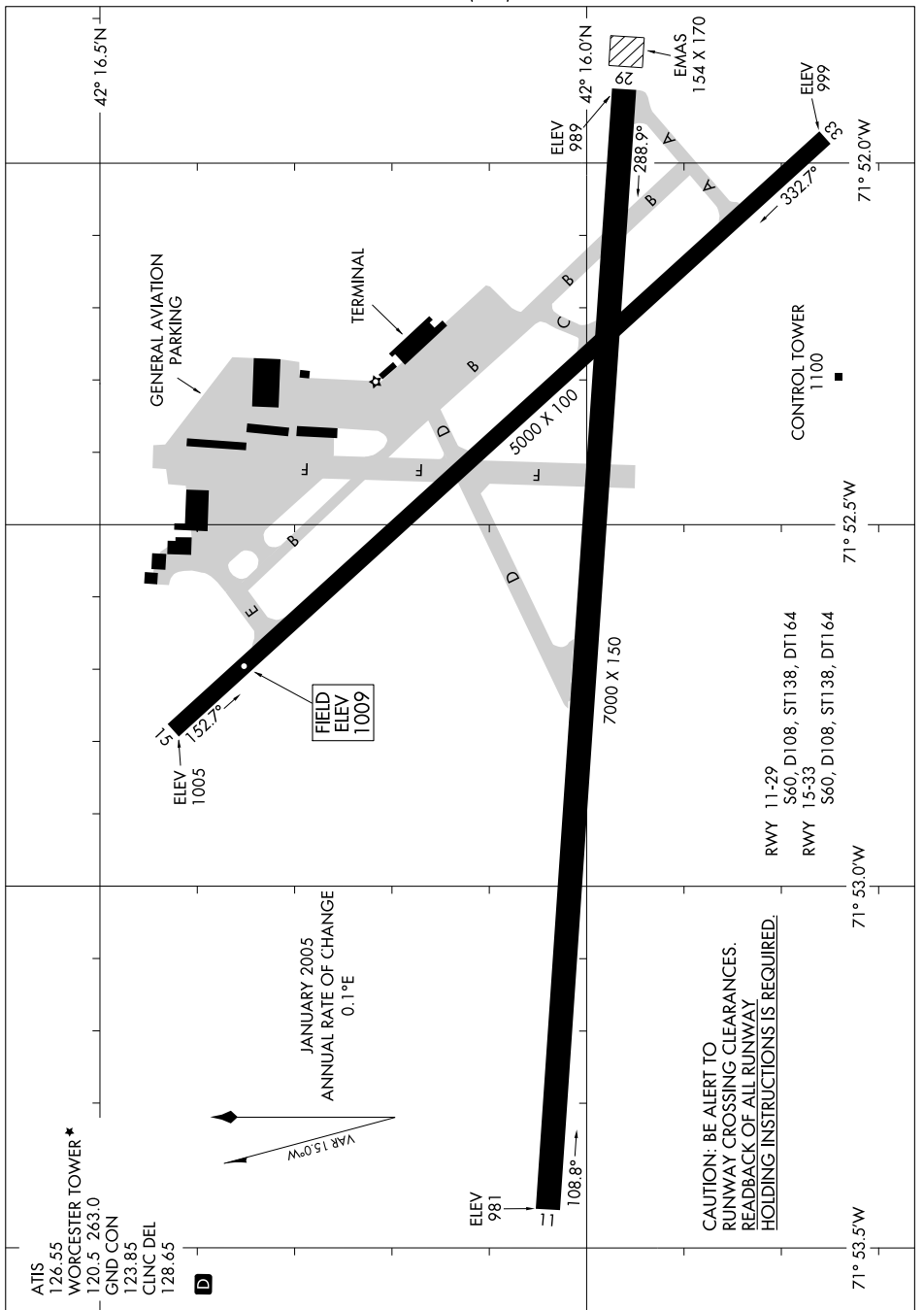
|                             |  |  |                               |                            |
|-----------------------------|--|--|-------------------------------|----------------------------|
| ATIS<br><b>127.1 263.15</b> | BRADLEY APP CON<br><b>125.35 281.5</b> | WESTFIELD TOWER ★<br><b>118.9 (CTAF) 0 251.1</b> | GND CON<br><b>121.7 289.4</b> | CLNC DEL ★<br><b>121.7</b> |
|-----------------------------|--|--|-------------------------------|----------------------------|



# AIRPORT DIAGRAM

AL-652 (FAA)

WORCESTER REGIONAL (ORH)  
WORCESTER, MASSACHUSETTS



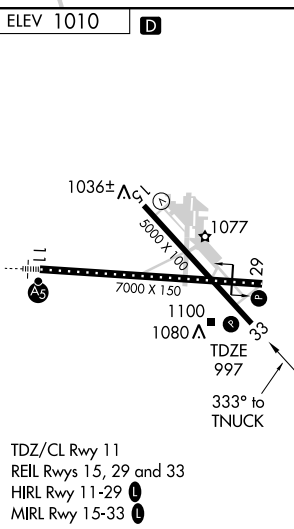
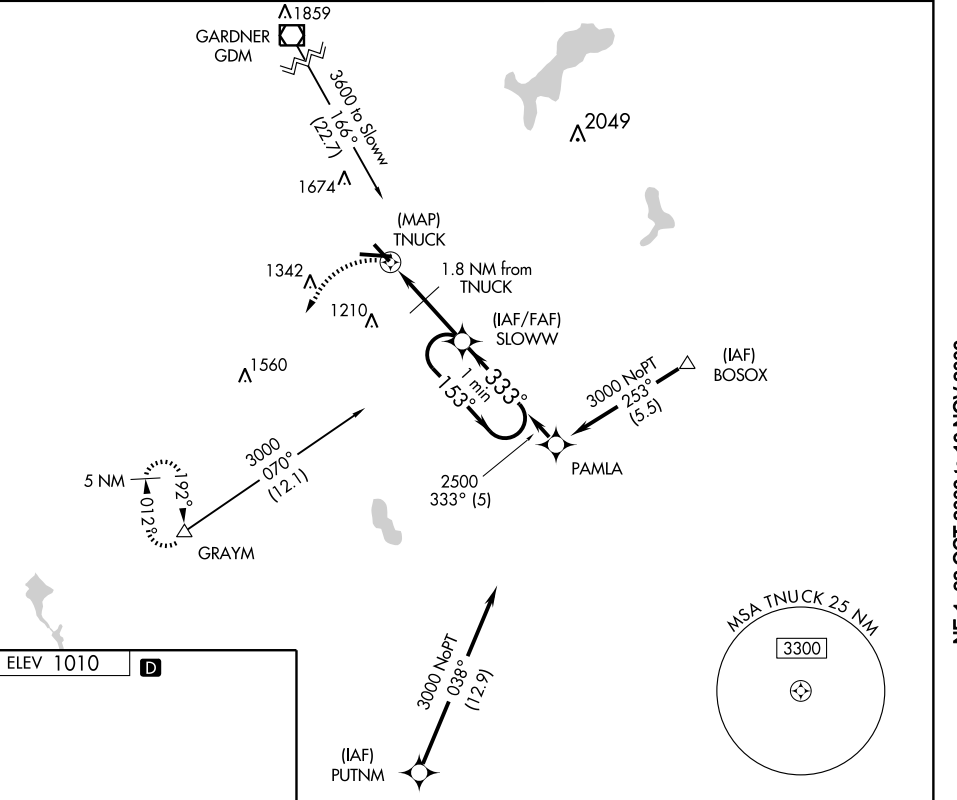
NE-1, 22 OCT 2009 to 19 NOV 2009

▼

▲ NA

MISSED APPROACH: Climbing left turn to 3000 direct GRAYM WP and hold.

|                |                                |   |                   |                    |                  |
|----------------|--------------------------------|---|-------------------|--------------------|------------------|
| ATIS<br>126.55 | BRADLEY APP CON<br>119.0 327.1 | WORCESTER TOWER ★<br>120.5 (CTAF) 263.0 | GND CON<br>123.85 | CLNC DEL<br>128.65 | UNICOM<br>122.95 |
|----------------|--------------------------------|---|-------------------|--------------------|------------------|



|                            |  |                    |  |                      |  |
|----------------------------|--|--------------------|--|----------------------|--|
| 3000 GRAYM                 |  | SLOWW              |  |                      |  |
| One Minute Holding Pattern |  |                    |  |                      |  |
| 1.8 NM from TNUCK          |  | 153° → 2500        |  |                      |  |
| TNUCK                      |  | ← 333°             |  |                      |  |
| 1700                       |  | ≤ 3.60° TCH 38     |  |                      |  |
| 1.8 NM                     |  | 2 NM               |  |                      |  |
| CATEGORY                   |  | A                  |  | B                    |  |
| S-33                       |  | 1340-1 343 (400-1) |  | 1340-1¼ 343 (400-1¼) |  |
| CIRCLING                   |  | 1540-1 530 (600-1) |  | 1640-1 630 (700-1)   |  |
|                            |  | 1720-2 710 (800-2) |  | 1960-3 950 (1000-3)  |  |

|   |                        |  |
|---|------------------------|--|
| LOC/DME I-RSR<br><b>110.9</b><br>Chan <b>46</b> | APP CRS<br><b>109°</b> | Rwy Idg <b>7000</b><br>TDZE <b>981</b><br>Apt Elev <b>1010</b> |
|---|------------------------|--|

ILS or LOC RWY 11  
WORCESTER RGNL (ORH)

**T** If local altimeter setting not received, use Laurence G. Hanscom Fld altimeter setting and increase all DAs/MDAs 200'.

**A** VDP NA when using Laurence G. Hanscom Fld altimeter setting.

MALSR  
A5

**MISSED APPROACH:** Climb to 1400 then climbing right turn to 3000 via GDM VOR/DME R-167 to LAWRN Int/GDM 23 DME and hold.

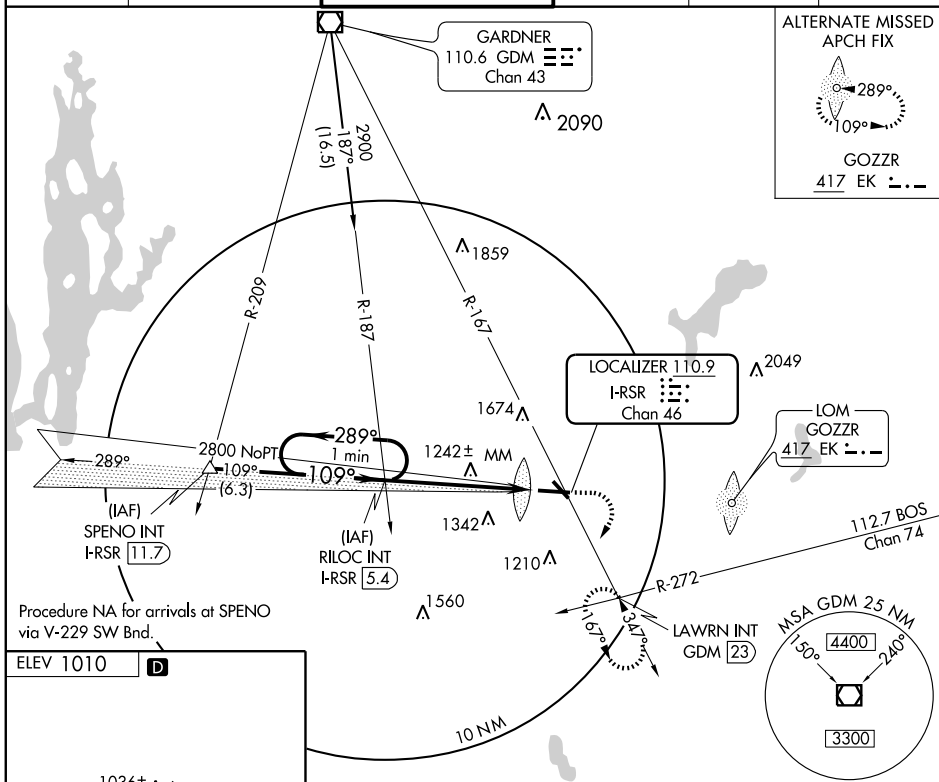
ATIS  
126.55

BRADLEY APP CON  
119.0 327.1

WORCESTER TOWER ★  
120.5 (CTAF) **L** 263.0

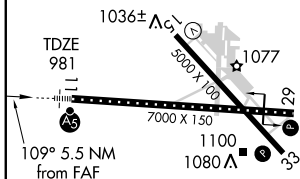
GND CON  
123.85

CLNC DE  
128.65

UNICOM  
122.95

ELEV 1010

**D**



TDZ/CL Rwy 11  
REIL Rwy 15, 29 and 33  
HIRL Rwy 11-29 **L**  
MIRL Rwy 15-33 **L**

FAF to MAP 5.5 NM

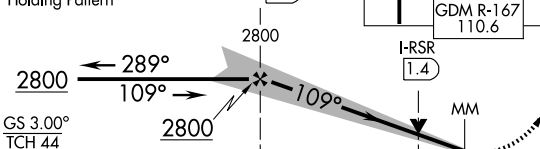
|         |      |      |      |      |      |
|---------|------|------|------|------|------|
| Knots   | 60   | 90   | 120  | 150  | 180  |
| Min:Sec | 5:30 | 3:40 | 2:45 | 2:12 | 1:50 |

### One Minute Holding Pattern

RILOC INT  
I-RSR 5.4

140  
↑

300

LAWRN INT  
GDM 23

| CATEGORY | A                     | B                     | C                      | D                       |
|----------|-----------------------|-----------------------|------------------------|-------------------------|
| S-ILS 11 | 1181/18               |                       | 200 (200-½)            |                         |
| S-LOC 11 | 1500/24               | 519 (500-½)           | 1500/50<br>519 (500-1) | 1500/60<br>519 (500-1¼) |
| CIRCLING | 1540-1<br>530 (600-1) | 1640-1<br>630 (700-1) | 1720-2<br>710 (800-2)  | 2000-3<br>990 (1000-3)  |

|   |                        |  |
|---|------------------------|--|
| LOC/DME F-EKW<br><b>110.9</b><br>Chan <b>46</b> | APP CRS<br><b>289°</b> | Rwy Idg <b>7000</b><br>TDZE <b>991</b><br>Apt Elev <b>1010</b> |
|---|------------------------|--|

ILS or LOC RWY 29  
WORCESTER RGNL (ORH)

**T** Autopilot coupled approach NA below 1226 feet. DME REQUIRED.  
**A** If local altimeter setting not received, use Laurence G. Hanscom Fld altimeter setting and increase all DAs/MDAs 200'.

**MISSED APPROACH:** Climb to 1600 then climbing left turn to 3000 via heading 240° and GDM R-179 to GRIPE Int/GDM 25.5 DME and hold.

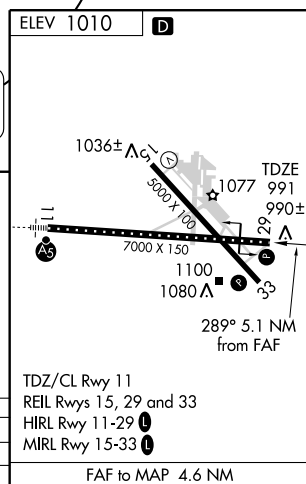
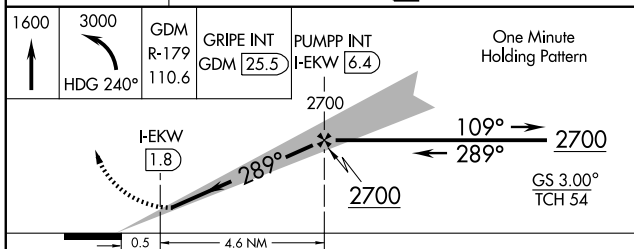
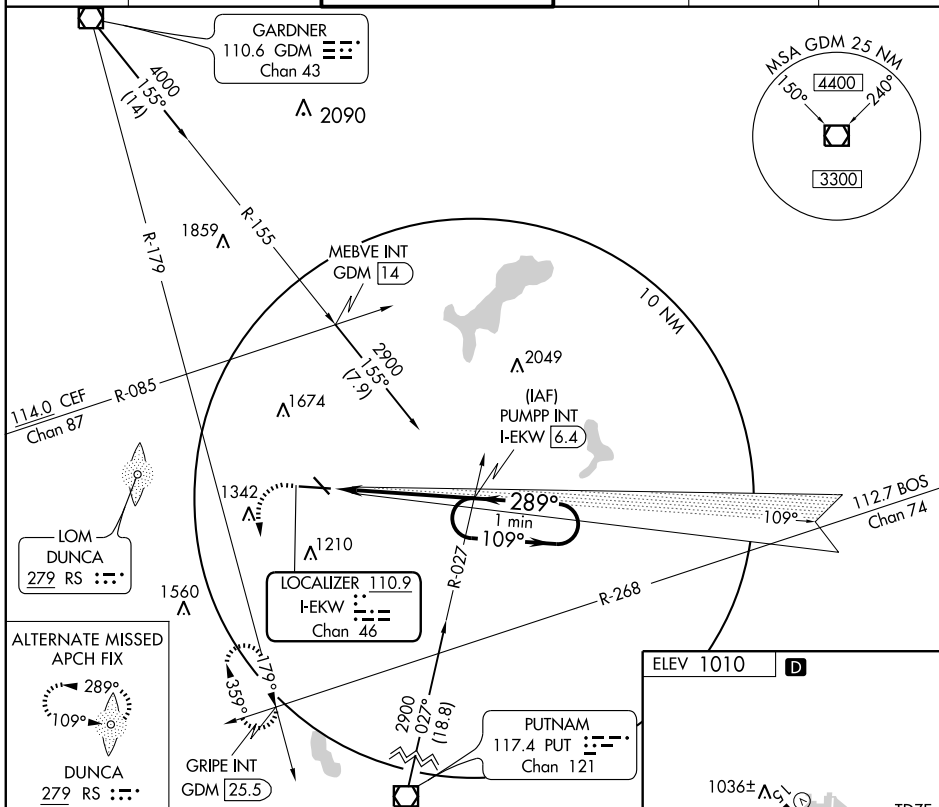
ATIS  
**126.55**

BRADLEY APP CON  
119.0 327.1

WORCESTER TOWER ★  
120.5 (CTAF) **L** 263.0

GND CON  
123.85

CLNC DE  
128.65

UNICOM  
122.95

NE-1. 22 OCT 2009 to 19 NOV 2009

| CATEGORY | A                     | B                     | C                     | D                      |
|----------|-----------------------|-----------------------|-----------------------|------------------------|
| S-ILS 29 |                       | 1191/40               | 200 (200-¾)           |                        |
| S-LOC 29 |                       | 1260/50               | 269 (300-1)           |                        |
| CIRCLING | 1540-1<br>530 (600-1) | 1640-1<br>630 (700-1) | 1720-2<br>710 (800-2) | 2000-3<br>990 (1000-3) |

| FAF to MAP 4.6 NM |      |      |      |      |      |
|-------------------|------|------|------|------|------|
| Knots             | 60   | 90   | 120  | 150  | 180  |
| Min:Sec           | 4:36 | 3:04 | 2:18 | 1:50 | 1:32 |

|                   |             |          |             |
|-------------------|-------------|----------|-------------|
| LOM RS            | APP CRS     | Rwy Idg  | <b>7000</b> |
| <b><u>279</u></b> | <b>109°</b> | TDZE     | <b>981</b>  |
|                   |             | Apt Elev | <b>1010</b> |

NDB RWY 11  
WORCESTER RGNL (ORH)

**T** If local altimeter setting not received, use  
**A** Laurence G. Hanscom Fld altimeter setting  
and increase all MDAs 200'.

MALSR  
A5

**MISSED APPROACH:** Climbing right turn to 3000 via GDM VOR/DME R-167 to LAWRN Int/GDM 23 DME and hold.

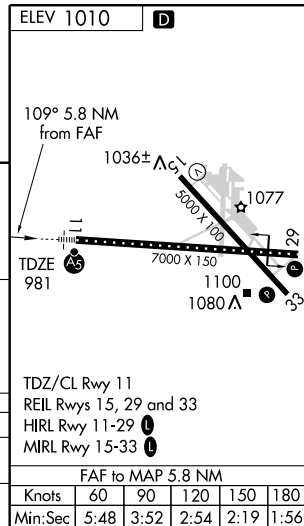
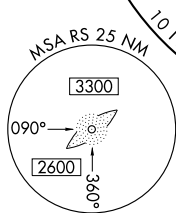
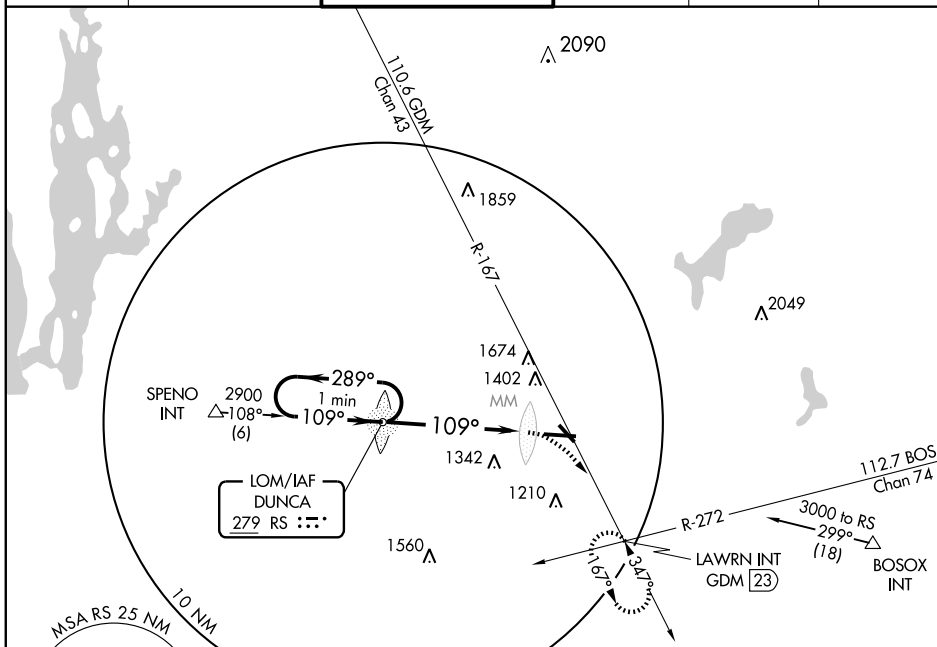
ATIS  
**126.55**

BRADLEY APP CON  
119.0 327.1

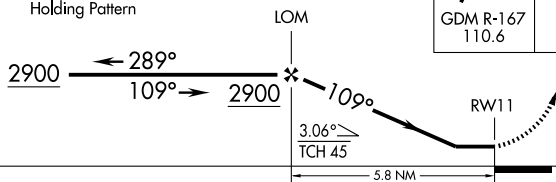
WORCESTER TOWER ★  
120.5 (CTAF) **L** 263.0

GND CON  
**123.85**

CLNC DEL  
**128,65**

UNICOM  
122.95

### One Minute Holding Pattern




| CATEGORY | A       | B           | C                       | D                      |
|----------|---------|-------------|-------------------------|------------------------|
| S-11     | 1680-40 | 699 (700-3) | 1680-1½<br>699 (700-1½) | 1680-2<br>699 (700-2)  |
| CIRCLING | 1680-1  | 670 (700-1) | 1720-2<br>710 (800-2)   | 2000-3<br>990 (1000-3) |

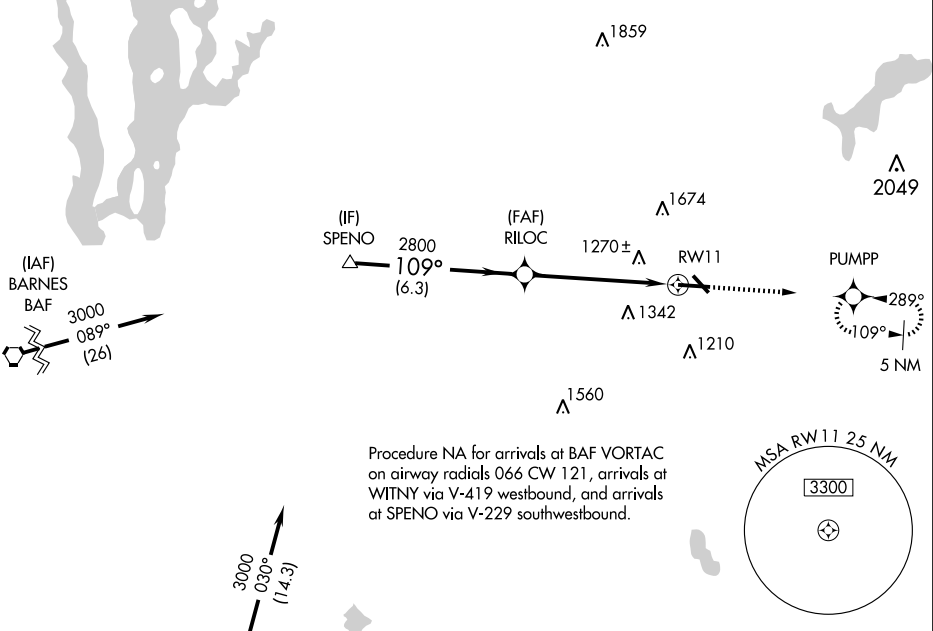
| FAF to MAP 5.8 NM |      |      |      |      |      |
|-------------------|------|------|------|------|------|
| Knots             | 60   | 90   | 120  | 150  | 180  |
| Min:Sec           | 5:48 | 3:52 | 2:54 | 2:19 | 1:56 |

|          |         |          |      |
|----------|---------|----------|------|
| WAAS     | APP CRS | Rwy Idg  | 7000 |
| Ch 77999 | 109°    | TDZE     | 981  |
| W11A     |         | Apt Elev | 1010 |

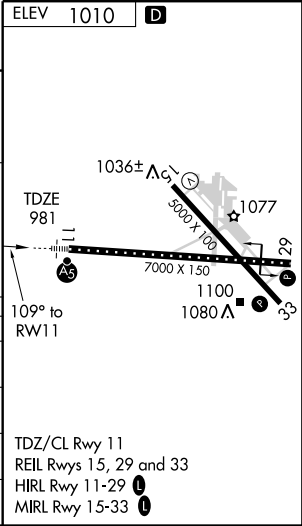
**DME/DME RNP -0.3 NA.** For inoperative MALS, increase LPV visibility all Cats to RVR 6000. If local altimeter setting not received, use Laurence G. Hanscom Fld altimeter setting and increase all DAs/MDAs 200'. VDP NA when using Laurence G. Hanscom Fld altimeter setting.

**MALS**  
 MISSED APPROACH: Climb to 2700 direct PUMPP and hold. When authorized by ATC, continue climb-in-hold to 3000.

|        |                 |                      |         |          |        |
|--------|-----------------|----------------------|---------|----------|--------|
| ATIS   | BRADLEY APP CON | WORCESTER TOWER ★    | GND CON | CLNC DEL | UNICOM |
| 126.55 | 119.0 327.1     | 120.5 (CTAF) 0 263.0 | 123.85  | 128.65   | 122.95 |

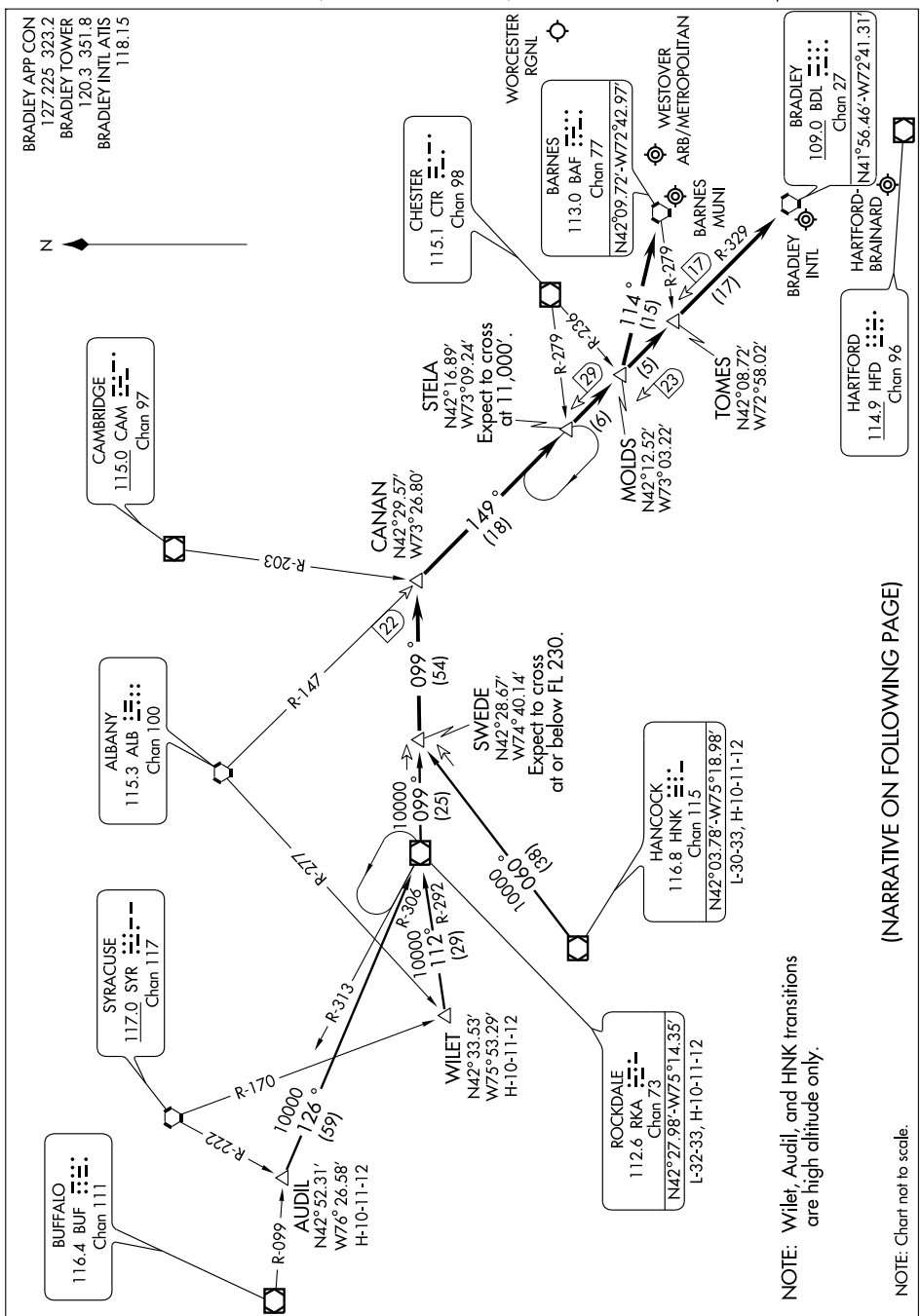


|               |               |  |               |  |             |  |               |  |
|---------------|---------------|--|---------------|--|-------------|--|---------------|--|
|               | SPENO         |  | RILOC         |  | RW11        |  | PUMPP         |  |
|               | 3000          |  | 2800          |  | 2700        |  | 2700          |  |
|               | 109°          |  | 109°          |  | 109°        |  | 109°          |  |
|               | 6.3 NM        |  | 3.9 NM        |  | 1.6 NM      |  | 1.6 NM        |  |
| CATEGORY      | A             |  | B             |  | C           |  | D             |  |
| LPV DA        | 1334/40       |  | 353 (400-¾)   |  |             |  |               |  |
| LNNAV/VNAV DA |               |  | NA            |  |             |  |               |  |
| LNNAV MDA     | 1520/24       |  | 539 (600-½)   |  | 1520/50     |  | 1520/60       |  |
|               |               |  |               |  | 539 (600-1) |  | 539 (600-1 ¼) |  |
| CIRCLING      | 1540 - 1 ¼    |  | 1640 - 1 ¼    |  | 1720 - 2    |  | 2000 - 3      |  |
|               | 530 (600-1 ¼) |  | 630 (700-1 ¼) |  | 710 (700-2) |  | 990 (1000-3)  |  |









(NARRATIVE ON FOLLOWING PAGE)

## ARRIVAL DESCRIPTION

AUDIL TRANSITION (AUDIL.SWEDE1): From over AUDIL INT via RKA R-306 to RKA VOR/DME; then via RKA R-099 to SWEDE INT. Thence. . . .

HANCOCK TRANSITION (HNK.SWEDE1): From over HNK VOR/DME via HNK R-060 to SWEDE INT. Thence. . . .

ROCKDALE TRANSITION (RKA.SWEDE1): From over RKA VOR/DME via RKA R-099 to SWEDE INT. Thence. . . .

WILET TRANSITION (WILET.SWEDE1): From over WILET INT via RKA R-292 to RKA VOR/DME; then via RKA R-099 TO SWEDE INT. Thence. . . .

ARRIVALS FOR BRADLEY INTL and HARTFORD-BRAINARD

. . . . From over SWEDE INT via RKA R-099 to CANAN INT. Then via BDL R-329 to BDL VORTAC. Expect radar vectors to final approach course.

ARRIVALS FOR BARNES MUNI, WESTOVER ARB/METROPOLITAN and WORCESTER  
RGNL

. . . . From over SWEDE INT via RKA R-099 to CANAN INT. Then via BDL R-329 to MOLDS INT. Then direct to BAF VORTAC. Expect radar vectors to final approach course.

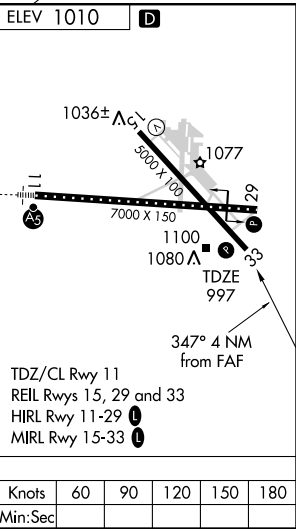
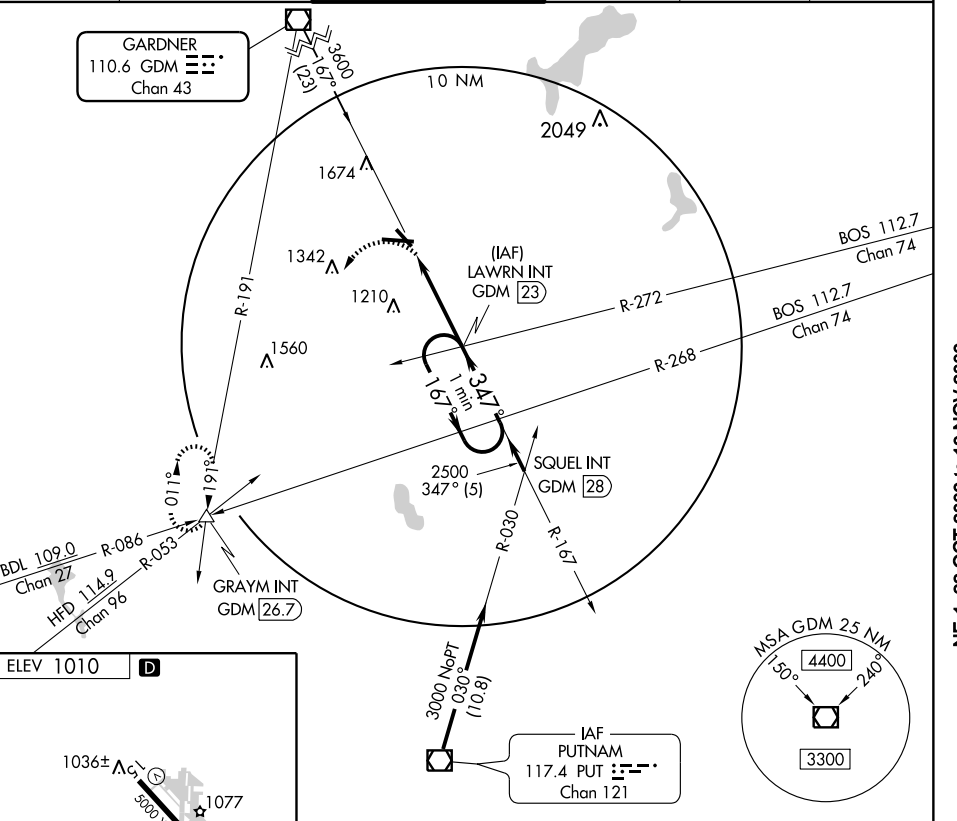
|  |                        |   |
|--|------------------------|---|
| VORTAC GDM<br><b>110.6</b><br>Chan <b>43</b> | APP CRS<br><b>347°</b> | Rwy Idg<br>TDZE<br>Apt Elev<br><b>5000</b><br><b>997</b><br><b>1010</b> |
|--|------------------------|---|

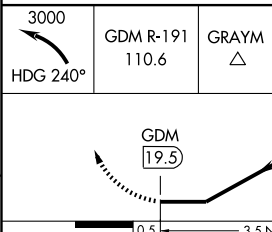
▼

▲

MISSED APPROACH: Climbing left turn to 3000 via heading 240° and GDM R-191 to GRAYM Int/GDM 26.7 DME and hold.

|                       |                                       |  |                          |                           |                         |
|-----------------------|---------------------------------------|--|--------------------------|---------------------------|-------------------------|
| ATIS<br><b>126.55</b> | BRADLEY APP CON<br><b>119.0 327.1</b> | WORCESTER TOWER ★<br><b>120.5 (CTAF) 0 263.0</b> | GND CON<br><b>123.85</b> | CLNC DEL<br><b>128.65</b> | UNICOM<br><b>122.95</b> |
|-----------------------|---------------------------------------|--|--------------------------|---------------------------|-------------------------|



|   |    |                       |             |                       |                  |   |                         |
|---|----|-----------------------|-------------|-----------------------|------------------|---|-------------------------|
|  |    | GDM R-191 110.6       |             | GRAYM                 | LAWRN INT GDM 23 | One Minute Holding Pattern              |                         |
|   |    | GDM 19.3              |             | 347°                  |                  | 167° → 2500<br>← 347°                   |                         |
|   |    | 0.5                   |             | 3.5 NM                |                  | VGSI and descent angles not coincident. |                         |
| CATEGORY  |    | A                     |             | B                     |                  | C                                       | D                       |
| S-33  |    | 1520-1                | 523 (600-1) |                       |                  | 1520-1½<br>523 (600-1½)                 | 1520-1¾<br>523 (600-1¾) |
| CIRCLING  |    | 1540-1<br>530 (600-1) |             | 1640-1<br>630 (700-1) |                  | 1720-2<br>710 (800-2)                   | 1960-3<br>950 (1000-3)  |
| Knots   | 60 | 90                    | 120         | 150                   | 180              |   |                         |
| Min:Sec   |    |                       |             |                       |                  |   |                         |

NE-1: 22 OCT 2009 to 19 NOV 2009